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ORIGINAL ARTICLES.

THE MORBIFIC INFLUENCE OF DERANGED NERVE FORCE.*

By Egbert Guernsey, M. D., New York.

DISEASE has been defined as any deviation from health presenting fairly well marked symptoms, and having a definite and characteristic etiological and pathological character. In the light of modern science, a more correct definition would be, the morbific influence of deranged nerve force, and the starting point located somewhere in the delicate and complicated nerve structure into which flows that vital principle which we call life, kindling into active energy every cell in the complicated structure of the entire human system. The anatomist finds the bodily system consists of a series of human forms woven together, and interlaced through each other, one form clothing another, and one form supporting another. If the bony structure is separated from the body, it presents the rude image of a man. If now, we take the muscular system, which immediately clothes that of the bony form, and separate that from the rest of the body, we have a form more fully human than the other, and more closely resembling the perfect body. If we treat the arterial and venous system the same way, the likeness to a perfect human form is still more apparent; but if we take the brain and nervous system, with every nerve fibre represented, the image seems complete, and the perfect man stands before you. The higher we ascend from the more coarsely organized structure of the frame work of the body to the delicately organized nerve tissues, the nearer we approach the perfect human form. During our life in this world the soul weaves for itself a receptacle through which it can act in its work of evolution, of development and of energy. That receptacle, through which flows the divine life, is the nervous system, through which directly or indirectly the whole process of life and the whole power of the mind is carried on. Thus, the soul is not a mere abstract thinking principle; but, like the body, it has multitudes of parts, its variety of organs; its change and flux of constituent elements.

When it separates from the material body, that is simply a falling away of the particles of matter with which it clothed itself in its earthly life, and a standing forth in the radiant beauty of its spiritual form. There is no mistaking it. It is the old form we loved, but how much more beautiful, how much more sweet, divested of its earthly garments! We have seen that man has two bodies, a spiritual and a physical; one mortal, subject to change and decay, and one immortal, a part of the divine life, the God within us which makes us a part of God, as the little cell forms an integral part of the human being. Each human being, then, is an impersonal God, one cell in all that pervading life which fills the universe, from the most minute atom of star dust to rolling worlds, the whole of which forms a personal God; each atom, each cell forming an integral part. This life, first flowing through the nervous system, evolves the power of each nerve cell, which in its turn kindles into full activity every other cell of the body. But we can comprehend just as little the nature of nerve energy as we can that of the soul. We cannot separate it from the nervous system and subject it to tests to determine its constituents, but we can, to a certain extent, measure its capacity of endurance or resistance and how this may be affected by food, by surroundings, and by mental conditions. And it seems to me that through this line of investigation, and the study of remedial agents through this light, from the standpoint of their general and local effect upon the nervous organization, that the greatest relief is yet to come to the sick. The investigations of the psychologists in the laboratories which have recently been established in connection with some of our prominent universities, have already increased the knowledge of the power of nerve energy and the rapidity of its transmission, and will, undoubtedly, point out a better way of supplying the waste than we now possess.

The movement of this force differs from electricity or light, its movements being only about thirty meters a second, while electricity is many thousand. When we remember that a meter is 39.370 inches or over 3,000 feet, and that nerve force moves towards the brain from thirty-two to thirty-four metres a second, and from the brain from twenty-seven to twenty-eight meters a second, we can form only a faint idea of how a single note of discord may affect the harmony of the entire structure. As in the process of evolution our nervous system becomes more highly organized, or additional elements of perception and intellection be evolved, the innumerable phenomena existing in the world now unknown to us will be ever present realities. The great problems of life's mysteries will be solved, and the existence of a soul, as an entity, as clearly demonstrated as that of the human body. The speculations of our friend Dr. Gorton, in his able essays on the Monism of Man, will be proved or disproved by facts which cannot be questioned, and the question

* Read before the Clinical Club, May 18th.

which has called forth the brilliant disquisitions of Dr. Carmichael in several of the recent issues of the TIMES, on "Nervous Matter: What is it?" be answered so conclusively as to admit of no doubt, and yet perhaps not till long after the clearer spiritual perceptions of our gifted friend in another world has solved the mystery. Who can doubt that every nerve cell in the vast network of cells, fibres and ganglia in the human body is the seat of a conscious force which has the capacity of attention and will? May we not conclude then that the process of thought depends upon, and is the result of the action and the reaction of the nerve cells of the gray matter of the nervous system, impelled by that other element of which we have spoken, which is in reality spirit, mind, soul? As the power of these nerve cells travels to and from the great batteries of life, the accumulators of force, every cell is reached with its life giving power, each stimulated to perform its proper function.

Reasoning along this line, it is not difficult to appreciate the fact that this central and pervading power may so act upon certain organs as to restore their wasted energy. It is in the experience of every physician that death often occurs and physicial derangement becomes permanent, simply from a lack of energy. Who has not seen, over and over again, the sad pictures of life ebbing away because it had lost its charms? And who has not seen also, the strong, resolute will, fighting with death, and coming off conqueror, even when its icy fingers were freezing the fountains of life, and its dark shadow shutting out the light from the eyes? "Any one but Napoleon would have died," said the great emperor, as his mighty will triumphed over death. Douglass Jerrold, many, many years before his death, was given up by his physicians. In after life he told of the sad face of his physician and friend, as he sat by his side, holding his cold hand in his, with his fingers resting upon his faintly flickering pulse, and saying, "Douglass, we have done all that we can, but we cannot save you; you have only a little time to live." As he spoke, the eyes of the dying man seemed to expand in the growing intensity of his look as he faintly whispered, "*Die? I die?* Why, I do not want to die. My wife needs me, my little children need me. What will become of them? No one will take care of them. I can't die, I won't die," and his voice rang through the room like a trumpet, and he did not die. Will conquered death.

My friend Dr. Hills narrates the case of a warm personal friend and patient, who summoned him from Kentucky, bidding him come speedily, for he was dying. The time of starting was telegraphed, and on the journey the sick man located his friend from point to point, calculating the hour of his arrival. As he entered the room the loving smile and the extended hand greeted him with earnest inquiries of his wife, sick in his New York home and tender messages to her, and then the filmy eye and the growing pallor of the face showed that the end had come. Death had been held at bay and life extended through the power of will.

If the evolution of *force* in the nerve cell is impaired from any cause, by reflex action, by increased or diminished blood pressure, or the transmission of the force checked by any pressure or derangement of the transmitting nerve fibres, the effects may be felt at the extremity of the nerves, and in organs supplied with power from certain localized nerve cells. Thus, an irritated nerve in the end of the finger may give rise to distinct herpes zoster along the whole track of the nerve till it unites with the main branch. The herpes, in this, as in other locations—especially in children—and also many other eruptions, is a distinct neurosis, to be treated as such, if treated successfully. Diabetes, often fatal and yet often curable in certain stages, and in certain conditions of the system, is thought by pathologists to commence as a neurosis, having its origin in fear, mental trouble or local irritation in some portion of the great nerve centres, as well as from various psychical causes. Bernard has traced fatal *diabetes mellitus* to an irritation of the floor of the fourth ventricle of the brain; Schiff, Pavy, Ecxhard, Klebs, Munck, Vulpain and numerous other investigators have found its origin in different portions of the brain, spinal cord, spinal and sympathetic nerves, as well as in intoxicating poisonings and disorders of nutrition. The fact has been proved by hosts of observers that glucose may be found in the urine after great worry, intense fear, faulty nutrition, disappearing sometimes as suddenly as it appeared, and at others, if the unfavorable condition of mind and body continue, tightening its hold with the grasp of death. The impaired action of the nerve cells, transmitting through the nerve to the liver that peculiar force which re-arranges molecules intended for nutrition, into sugar to be excreted in waste of nutrition and force no one yet has been able to explain, and yet the fact that we are dealing with a neurosis is abundantly proved. And this is probably the reason that no remedy is so successful in the early stages of this disease, before serious organic changes have taken place, as opium or some of its alkaloids.

A case was recently brought to my attention by my friend, Dr. Carmichael. The patient was a lady, perhaps forty years of age. The specific gravity of her water was 40°; under the influence of codein, in half grain doses, in a few weeks every vestige of this disease disappeared and has not returned. The observation of Moreau, in 1870, affords a possible explanation of the sudden occurence of watery diarrhœa. He opened the abdomen in a fasting animal, and isolated by ligatures thin loops of intestines, each loop from four to eight inches long. All the nerves passing to the middle loop were divided, taking care to avoid the blood vessels. The intestine was then replaced and the wound closed with sutures. The animal was killed next day. The two loops with the nerves intact were found empty and the

mucous membrane dry. In the other was a clear alkaline liquid, colorless, with floculi of organic matter on boiling.

The phenomena of chills, fever, congestion, are illustrated in the action of cold, heat, malaria, ptomains, or any influence which will exalt or depress any of the ganglia of the great sympathetic. The depression or exaltation, acting through the vaso-motor nerves, whose network of fibres extends to every blood cell, and controls the circulation, localizes disease, and to a certain extent controls the process of recovery. It seems to me in the future the most brilliant triumphs in our profession will be through the avenues opened by a careful study of psychology and the nervous system.

THE THREEFOLD CONSTITUTION OF MAN—CONSIDERED WITH RELATION TO INSANITY.

By Henry R. Stiles, A. M., M. D.

MY object, in this paper, is to invite the attention of such of my professional brethren as may chance to read it, to the importance—as it seems to me—of a wider and deeper consideration of the factors which enter into the causation of mental aberration, than is generally given to the subject. It is a difficult matter to set forth properly, without seeming to intrude unduly upon the domain of theology; and it is all the more difficult because, in these days of materialism, and of defective Christian thought and belief, there are few, even among professedly Christian physicians, who approach the subject from what may be termed its spiritual side. The study of mental aberrations in their varied forms, is so largely dependent on their objective signs, that we are to a considerable extent deprived of the advantages which our diagnosis might derive from a knowledge (could we but obtain it) of their subjective symptoms. In the case of purely physical diseases, this might not, perhaps, so much matter; but in mental cases, where the mind, as interpreter for the body, is so at fault as to render us no help whatever, we sadly miss some subjective clue to the causes of disturbance. Moreover, it is a fact that, at the present day, the whole trend of medical science, both in its methods of study and of application, are so strongly and entirely material and practical, that we instinctively decline to admit the existence of any factor or influence of causation, which is not absolutely tangible to our own senses. Thus it happens, that we have, among physicians and psychologists, an attitude of thought and belief distinctly inimical to any proper consideration of mentality (either normal or abnormal) from its *spiritual* aspect.

Still, there *is* a spiritual side of the case—a spiritual element which must be considered, if we would fully comprehend the workings of mind, whether healthy or unhealthy. The teachings of the Holy Scriptures (for I am planting my argument squarely on the Christian belief in divine revelation) most clearly declare the *threefold* constitution of man, viz.: spirit, soul and body.

Man's nature is commonly spoken of as *twofold*, *i. e.*, soul and body. But the Scriptures, again and again, declare the existence in man of *spirit*, as distinct from soul; and St. Paul unequivocally asserts it in I. Thess. v. 23, ("I pray God your whole spirit and soul and body be preserved blameless," etc.); and, with yet more distinctive meaning, in Hebrews iv. 12, where he describes the intense power of the "Word of God," as cleaving asunder the soul and the spirit.

Now in dealing with the varied forms of mental disease (using the term in its broadest sense, from the twilight of the "borderlands" to the very darkest phase of absolute insanity) all physicians of this day fully recognize the complex and interlacing relations of the body and the soul. The body, the tabernacle of the soul, bearing the impress of God's own image; that which connects us with the outward world, furnishes the inlets to all its impressions, the apparatus of instruments for the reaction upon it. The soul, that which thinks and feels, the seat of all the passions and affections and emotions which are kept in such constant commotion by the changes and chances of this mortal life, and which is also the seat and residence of mind, the intellectual and emotional part of man, where all the powers of the understanding keep their court and fulfil their office; the soul—of which it has been well said that, "distinct from the body and surviving its dissolution, though connected with it now by mysterious ties and made to share its shifting fortunes, clear and vigorous, if its companion is in health, dull and depressed in its infirmity; the activity of the mind is a matter of immediate consciousness, it has been recognized alike by Jews and heathens, as it is by Christians, as capable of existing separately and apart, however unsatisfied, without union with the body."

But the *third* element of man's nature—the *spirit*—has received less recognition than it deserves, at the hands of metaphysicians and psychologists. This is not strange, since the ancients seem scarcely to have had a perception of it. Our systems of mental philosophy do not recognize it, and it is but scantily apprehended even by those who walk in the light of Christian faith and teaching. Theologians, also, content themselves with the *two*-fold constitution of man, and rarely allude to that third element, the existence of which is so plainly declared in Holy Writ.

In that passage of the Epistle to the Hebrews to which we have referred, St. Paul (himself, both by rare intellectual gifts and divine inspiration, the keenest of all theologians) not only declares, but makes clear the difference, and yet the close union, between the soul (mind) and spirit, for while the body is the apparatus of manifestation of the soul, the soul itself is but the medium through which the spirit acts. That sanctification of the *whole* man ("spirit, soul and body,") that perfect soundness of manhood which the Apostle

so earnestly desired to see realized in his fellow-believers, must necessarily commence in the *spirit* of man; for it is that part of man's constitution which most immediately connects us with God, as a flame catches a flame—and thus draws up after it the more sluggish and incapable part of our complex being. As the Scriptures say, "There is a spirit in man, and the inspiration of the Almighty giveth them understanding," (*Job.* xxxii., 8) * *i. e.*, it is by means of man's *spirit* (not his soul or mind) that he is brought into contact with spiritual truths, and by it alone that he is enabled to apprehend (though he may never fully comprehend) them. So, also, we are said to be "renewed in the *spirit* of our mind," not in our mind directly. These are points which will come home with force at least to the knowledge of the Christian believer. And, as our bodies and our intellects suffer, when the exercise of their respective functions is neglected or perverted, so it is with this spiritual element of our being. If, as is too often the case, the intellectual faculties are cultivated at the expense of the spiritual, the latter become weakened and even dormant. Thus it is that we see some of the world's greatest intellects fully apprehending and enjoying the great truths of revelation, while others, of undoubted intellectual ability, utterly fail to comprehend or value them.

Now, I come to the more immediate point of my remarks, which I formulate in the following proposition, viz.: *The spirit of a man, when brought into perfect accord with the will of God, can so control his natural faculties, that his most evil propensities may be suppressed, or, at least, kept in abeyance.* This is a well proven fact in the experience of many lives. A lively, but unregulated imagination, for example, may easily lead a man into the habit of lying; or, if used in the fear of the Lord, it may lead him to apprehend the truth of God, as shadowed forth in every type.

Conversely, *the spirit of a man, yielding to Satan or the spirit of evil, can so affect his whole nature, that his evil propensities shall be augmented, to the perversion and utter wrecking of his mental (soul) faculties.*

Inasmuch, then, as that which "is in the spirit of man" finds its expression through his natural faculties, we have, not infrequently (and in varying degrees of expression) those *aberrations of spirit*, which simulate the aberrations of disordered mental function, arising from physical causes, and for which they are generally mistaken.

Now, at this point, I can imagine that some of my readers may begin to sniff the air and exclaim, "I know what he is driving at!"—it's the old theory of "possession," or "obsession," or "demoniacal possession." Well, in a general way, I admit the charge; though I do not like the application of these terms to the fact concerning which I write. I prefer to characterize that fact, as I deem it to be, as a derangement of man's *spiritual* element, as differentiated from derangement of his mentality. In other words, *I believe in the existence* at the present day (as in past times) *of a class of persons* (entirely outside of that very large class whom the advanced psychology of today recognizes at being unmistakably *mentally* insane, *i. e.*, on medical and physical grounds) *whose spiritual nature* (rather than their mental) *is so entirely "out of gear" as to lead them into actions and courses of life which very naturally bring them under the condemnation of society, as being mentally warped or unhinged.*

In this class we may include many (I will not say *all*) of those restless and perturbed spirits whose vagaries are so annoying to friends and relatives; "cranks," more or less disturbing, as well as dangerous to society; those who have long given unrestricted license to their lusts, passions and tempers; sexual perverts, monomaniacal sociologists, including anarchists, and the whole brood of victims of moral irritability and instability which hover between the lines of criminality and insanity. Undoubtedly, into one or the other of these extremes, some of these cases ultimately pass. But making all allowances and exceptions, I am convinced that there are many cases of so-called insanity, which are simply *maladjustments* of the sufferer's *spiritual* relations with his mind and body. During the years in which my professional walks have been mostly amid the shadows of the Valley of Distraught, I have met with several cases which I believe to have been purely of this spiritual character. If asked how I could differentiate them from cases of assured insanity, I should probably fail to formulate any guide to diagnosis which would satisfy unbelieving inquirers. They belong to a class of cases which must be utterly beyond the comprehension of those who ignore the existence of a spirit in man at all. And, even by those who admit its existence, the infinity and unsearchableness of spiritual truths cannot be fully comprehended, though they may be apprehended in part. The spirit which is in man, the Scriptures tells us, "discerneth the things of the spirit;" which is, in itself a plea for the greater care and cultivation in ourselves of that higher element of our nature, the spirit, by which we are enabled to apprehend "the things of God," and the mysteries of our life.

But, I may say this in general terms, that there is in these cases a certain element of remorse; an agony of suffering, an intensity of sorrow; or, in some cases, an acumen of perverted perception, a maliciousness,—not to say diabolism—of "the thoughts and intents of the heart," which seem to

* The succeeding verse in this speech of Elihu's, viz.: "Great men are not always wise; neither do the aged understand judgment," as well as the whole context of this passage, evidences that he had a clear discernment of the *spiritual* element of man's being—*the* element which clearly differentiates man from other animals. They have, indeed, a certain degree of mentality, which we call instinct; but have they any faculty which corresponds to the spirit of man, and which, we know tends *upwards* towards God? The teaching of Scripture is strongly against the existence of such a faculty in them, and science has not demonstrated it. No! Man alone has "understanding," (spirit) *and* reason.

proceed from the troubled depths of the *spiritual* nature, rather than from perturbation of the mental faculties or the emotions. The matter and character of the speech, and, also the expression of the eye, if carefully studied, will not infrequently furnish a clue. There is, in short, a *something*, indefinable, yet appreciable, in the *tout ensemble* of such cases, which can only be adequately accounted for by the perverted action of the higher spiritual element of our being upon its associates, the mind and the body.

Perhaps, in the existence of such a class of spiritual "derelicts," we have the germ of that theory of "moral insanity" which has been, of late years, lugged into the (expert) nomenclature of insanity. At all events, if there was, both among scientists, theologians and the thinking public, an admission of the fact of a *spiritual* faculty, as distinctive from our merely soul-ish faculties, we might be able to come to a better understanding of the "true inwardness" of some cases which now puzzle us deeply.

As before said, I am aware that I am open to the charge of opening the door for the revival of the old idea of "demoniacal possession," or "obsession," as the theologians term it. I admit it —because, if we admit of the existence of a *spirit* in man, capable of more intimate communion with God than his soul can make him, we must admit that such a spirit-faculty can also be acted upon by the evil spirits who are warring against God for the possession of man's soul. But, even if the world of to-day were fully to accept and re-adopt the old theory of "demoniacal possession," by which, in former ages, they accounted for *all* cases of insanity, I have no fear that there would be any return to the brutal and senseless treatment of the insane which then prevailed, and which was based upon that theory. The world has changed since that day, and civilization and the spirit of Christ, rather than the dogma of the theologians, now inform and guide the public mind.

Possibly some reader of these lines may say—"Well, grant that such cases do exist, and grant that they can be differentiated from cases of insanity proper—what can be done for them?" My reply would be that their recognition and elimination from any other cases of insanity, would be of itself the most important step towards their proper treatment; and that the treatment itself must necessarily be on moral and spiritual lines. One cannot but instinctively feel that the spiritual guide *ought*, "by good rights," to be of help in the managment and cure of a spirit out of harmony with itself and its environments. I confess to sharing somewhat the distrust, prevalent in our profession, of any clerical interference with our patients; and, especially so with those mentally affected. Yet, if I knew of a whole souled, wise and patient man of God, in whom, especially, the gift of *pastorship* was strongly developed, I should not hesitate to seek such a one's help in such a case. And, beyond that, I should endeavor to surround the patient with an atmosphere of restfulness, kindness and perfect truthfulness, besides calling in such adventitious aids as science can offer to meet the merely physical requirements of the case.

My feeling is, however, that the physician is, by virtue of his calling, the best and most available priest to deal with such cases. He will be so, if his own life be pure, if he be mindful of his own standing in Christ, if his own spirit has been illumined by the spirit of God, and his own lips touched as with a live coal from the altar of faith. Truly such a physician may be considered as a priest in the tabernacle of our earthly sojourning, as was Aaron in the tabernacle of the wilderness; he deals oftenest, it is true, with the services of its outer court—our *body;* but frequently also, as occasion requires, he enters the holy place of the *soul*, where burn the lamps of intellect and emotion; and, at times, if his spirit be sufficiently pure and endowed with discernment from on high, he may be permitted to penetrate the holiest of all—the *spirit*—the secret recess where dwells the light that is given by God himself. Could we—as physicians—fully realize the dignity of our calling, in this—its priestly character—we could more successfully minister than we now do, to the relief of that very large class of cases with which we are brought in contact—and which arise from a want of harmony between the *spirit* of man and his Maker, and its consequent reaction upon the *soul* (emotions and intellect) and the *body*, with which that Maker has joined it in partnership.

SOME REMARKS CONCERNING MERCURIC BROMIDE OF GOLD AND ARSENIC, WITH ESPECIAL REFERENCE TO ITS USE IN THE TREATMENT OF NEUROTIC CONDITIONS OF SPECIFIC ORIGIN.*

By Thomas Hunt Stucky, M. D., Louisville, Ky.

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At a recent meeting of this Society, I had occasion to mention the use of the bromide of gold and arsenic in epilepsy. Being, comparatively speaking, a new drug to this market, it was thought of sufficient interest to bring it more prominently before the Fellows.

The solution of mercuric bromide of gold and arsenic, after the formula of Dr. Barclay, of Pittsburg, is of a beautiful red color, does not deposit, odorless, and tasteless; dosage ranging from five to twenty drops, each drop containing 1-32 of a grain of gold, 1-16 of a grain of arsenic and 1-32 of a grain of mercury salts. It does not disagree with the stomach, nor relax the bowels. It will produce ptyalism, yet with less recession of the gums than is produced by mercury or the iodides.

Dr. Wood, in his admirable paper, read at the meeting of the Mississippi Valley Medical Asso-

* Read at meeting Louisville Medico-Chirurgical Society, April 1, 1894. Stenographically reported by C. C. Mapes.

ciation, in Indianapolis, laid great stress upon its efficacy in diseases termed scleroses, incipient phthisis, arthritis deformans, in sypihlitic diseases in its various forms, in hemiplegias, etc.

I have the pleasure of exhibiting three cases to-night, and a record of eight others, all of whom, with one exception, belong to the neuroses.

Case I.—No. 436 of my college clinical records; diagnosis, hemiplegia. W.O. M., aged 28, married; residence, Denver, Colo. Family history fairly good; occupation, proprietor of theatre. Habits, had used alcoholic beverages rather freely for five years. February 28, 1893, following a two days' drunk, patient vomited with great straining; passed into unconsciousness lasting seventy-two hours; complete dextra-hemiplegia, ataxia, aphasia, sinistra-hemiplegia supervened. December 2, 1893, patient presented himself at Clinic having complete paralysis of the right side, could not count fingers with left eye; tongue on protrusion pointing sharply to the right; corners of the mouth greatly depressed on right side; arm on the right side could scarcely be lifted away from the body; leg dragged after the patient in characteristic manner; all reflexes greatly exaggerated. Patient could answer yes and no to questions, but could not tell where he lived and had to be brought to the College. Was placed on liq. arsenic et hydrarg. iodide, five drops in a wine glass of water, after meals.

December 6th was given the mercuric bromide of gold and arsenic in five drop doses after meals.

December 9th.—Patient developed la grippe, treatment was discontinued, and acetanilide given.

December 13th.—Condition improved and mercuric bromide of gold and arsenic was given again.

December 20th.—Some improvement, medicine continued.

January 3, 1894, dose increased to ten drops.

January 26th.—Patient answers all questions with comparative ease, came to the Clinic by himself, can lift his arm as high as his shoulder, the characteristic tremor taking place when he attempts to raise it still higher, can walk tolerably well; treatment continued.

February 7th.—Continued improvement.

February 14th.—Eating and sleeping as good as before attack.

February 28th.—Steady improvement in gait and speech.

March 10th.—Doing well.

March 17th.—Dose increased one drop every other day.

March 21st.—Has regained self confidence.

April 4th.—Walks miles, does not have to use cane, no longer drags his foot. Secondary contraction of a slight degree has taken place in the fingers only. Students not familiar with the case could not detect any depression at angle of the mouth. Sight in left eye much improved, though outer half is still impaired. Tongue points nearly in the median line. Patient steadily improving.

Case II.—J. R. aged 35, tobacconist; personal and family history good; he has never had syphilis nor rheumatism. His trouble began about eighteen months ago, with the characteristic pains in the lower extremities. These pains were felt at irregular intervals, sometimes daily and sometimes not for the space of a week or ten days. A short time afterward he noticed the change in gait. He also had frequent attacks of sick headache, three or four seminal emissions weekly, and difficulty in holding the urine. These symptoms ceased about four months ago, but the ataxia has greatly increased, and the pains still continue. He has noticed in the last three or four months a decline in the sexual power. He was admitted into the Hospital February 1, 1894. The skin, reflexes and the knee jerk were normal; there were no sensory symtoms; he had the Argyll-Robertson pupil; co-ordination was so imperfect that he was unable to stand with the eyes closed and the feet together; and he could hardly make his way from one place to another.

In treating this case I started February 28th, with eight drops of the mercuric bromide of gold and arsenic, three times a day. From March 14th to April 1st, the dose was increased one drop each day, the total quantity given during thirty-three days being 1,245 drops, an average of thirteen drops at each dose.

Case III.—W. P., aged 32, painter; personal and family history good. His illness dates back to February 1, 1892, the symptoms being constipation, difficulty in voiding urine, stiffness and soreness in the knees. In a short time the legs became useless. In six weeks he was about on crutches, being at the time under treatment at Hot Springs. He entered the hospital July 7, 1892. At that time there was very little sensation in the left leg, the condition of the right being about normal. He had incontinence of urine and feces.

Commencing February 7th, I gave him five drops of the mercuric bromide of gold and arsenic after meals; the dose was increased daily until eleven drops were being given, making the average dose given during the course, of ten drops, thrice daily. Bladder and bowel symptoms restored.

Case IV.—Mrs. S. (I will refer to this case briefly, not being able to get the patient to come here to-night.) There was loss of sensation in right side of face; difficulty in co-ordination; ptosis, chronic constipation, loss of bladder control, reflexes lost. Four months' treatment followed by complete relief.

It could hardly be coincident that such decided changes for the better should have occurred in so short a time.

There have been and are now many preparations on the market which are not solutions of bromide of gold and arsenic, but bromide of gold with hydrobromic acid, arsenic acid, and arsenious acid. In the *Annual of the Universal Medical Sciences*, issue 1891, Dr. Hare, in his article on Experimental Therapeutics, concludes in reference to the action of bromide of gold:

(1) Bromide of gold undoubtedly inhibits the cortical motor centres, even when administered in smaller doses than other bromides. After an internal administration of bromide of gold, in the dose of one and a half to three and one tenth grains to the kilogramme of the animal's weight, even the strongest and very prolonged electric stimulation of the cortex fails to bring about any epileptic seizures. To obtain the same result from bromide of potassium, the latter should be introduced in the dose of nine and a quarter to ten and three quarter grains to kilogramme, while bromide of iodium should be given in still larger quantities.

(2) Irritability of individual motor centres, as determined by the appearance of contractions in corresponding muscular groups, is depressed by bromide of gold in but trifling degree.

(3) Excitability of the white substance of the motor region remains intact.

(4) The drug seems to affect mainly the tracts of communication between individual motor centres, as well as between remote areas of the cerebral cortex.

(5) It does not appear to possess any special cumulative action. This action cannot be due to the amount of bromide present therein, since it is in the weakest (55 per cent. by weight) of the three, while bromide of sodium is the heaviest (77.7 per cent.), the potassic salt standing midway.

In the *Annual of the Universal Medical Sciences*, year 1892, an authority states: "Better results can probably be obtained if the drug be given hypodermatically."

The opinion as to the efficacy of gold in disease has been indeed varied. In an article, *Medical Record*, Vol. 34, page 802, September, 1888, this appears—referring to article on gold and arsenic. "It is highly digestible," while farther on this startling statement appears, "There is probably not a sound clinical observation showing that gold possesses any special therapeutic efficacy in any disease."

The older therapeutists limit its field of usefulness. Bartholow speaks most highly of it, recommending the double chloride in waning sexual force, in granular and fibrous kidney, in melancholia, in atonic dyspepsia, catarrh of bile ducts, etc. The claim made that it produces auric fever has not been observed, nor have I seen any evidences of gastric irritation. In a case of syphilitic nodules with marked cephalagia, there was a rapid subsidence of the nodes, and relief of the head, by the mercuric bromide of gold and arsenic, proving clearly that there is a most decidedly alterative influence exerted.

The fact that the sedation produced by the bromide of gold is greater than that by the salts of potash and soda should give it a front rank in the treatment of epilepsy, fortified by the alterative influence of the gold and the tonic effect of the arsenic. It has long been recognized that arsenic is the treatment for chorea. In three cases of this disease, treated by bromide of gold and arsenic, the results were all that could be desired.

The solutions of gold, as prepared by Johnson & Johnson—

1st. Increase the appetite.

2d. Do not irritate the stomach nor disturb the bowels, seeming to stimulate peristalsis without sufficient irritation to produce purgation.

3d. Do exert decided powers of alteration, sedation where there is irritation, yet stimulation to waning powers.

4th. Are indicated in the majority of diseases affecting co-ordination.

5th. In fact, entitled to a trial in all neuroses.

DISCUSSION.

Dr. A. M. Vance: In the third case shown, was there any history of lead colic?

Dr. T. H. Stucky: The patient gives no history of lead colic.

Dr. S. G. Dabney: I saw the fourth case referred to by Dr. Stucky; there was complete paralysis of the motor oculi nerve. The gentleman, of course, had ptosis, and there was also some protrusion of the eye-ball. At the time I saw him, there were also some symptoms of beginning locomotor ataxia, not very marked at that time, but, perhaps, developed later. I have no doubt the agent mentioned by Dr. Stucky is valuable in many cases; but I have in mind cases similar to those he reports that recovered under large doses of the iodides. Two were cases of complete paralysis of the motor oculi nerve, which made a good recovery. One of them was a woman who also showed some symptoms of locomotor ataxia. I wish Dr. Stucky had been more explicit in his remarks concerning hemiopia in the first case he reported. I presume it means half vision of each eye, *i. e.*, one-half the field of vision of each eye is lost. Dr. Stucky will recall a case of this kind, occurring in a lady that we saw some time time ago, who had paralysis and well-defined hemiopia. She finally recovered from the paralysis, but the half sight remained the same. Dr. Hays will also remember a similar case; the patient was a man who had no well-defined paralysis, but had a great many cerebral symptoms and a clearly defined ease of hemiopia. The other symptoms have all gradually improved, but the half sight remains exactly as it was. This symptom of hemiopia may be due to disease of the optic nerve tract, or it may be due to a lesion of the cortex of the brain. As a rule it is not improved, even when the other nervous symptoms disappear. When paralysis, for instance, disappears, the hemiopia, as a rule, remains. It is not a frequent symptom, and I think it rather peculiar that I have seen two or three cases, in my experience, in Louisville. I remember having heard one of the occulists here, whose experience is larger than mine, say that he had not seen a single one.

Dr. Wm. Cheatham: I think Dr. Stucky's cases are all too recent to show what effect his treat-

ment is going to have, except in the third case, where improvement has been so marked. I would not be inclined to attribute the improvement entirely to the remedy. Especially in locomotor ataxia it is about as uncertain as in epilepsy, when you are going to have improvement, and whether this improvement comes from the remedy. I have seen cases where the eye muscles were involved in locomotor ataxia, and the patients have got apparently well, so far as the eyes are concerned, without any treatment. We all know that locomotor ataxia has periods of rest, especially in the early stages of the disease, and where the eye muscles only are involved; these cases often apparently completely recover without any treatment. I call to mind now the case of an army officer who afterward went East, and I took him to see Dr. Hammond, also Dr. Knapp, who diagnosed locomotor ataxia. This man at one time went four years between attacks. He had double vision, and sometimes complete ptosis. He had specific locomotor ataxia. The next attack came on in about two years, with complete ptosis of the left eye only. On account of these periods of rest it is, as I stated before, very hard to determine just what effect any remedy is going to have; therefore, I think Dr. Stucky s cases are too recent to say positively that the medication is the cause. His report, however, is one of much interest.

Dr. Wm. Bailey: Dr. Stucky has presented us with an exceedingly interesting clinic, and I want to say, moreover, that I am gratified, because it is in a department of therapeutics that has been very uncertain in its effects. Certainly, the cases presented to-night, with the history as detailed, should induce us to give the remedy a trial at any rate. I am sure that Dr. Cheatham is right as to the uncertainty of these cases, the progress and natural history of them is so marked, even under the most thorough treatment. I have had a case of epilepsy on bromides, without an attack for eighteen months, and believed that the remedy did a great deal of good; very much to my mortification, he had an attack yesterday and one again to-day, notwithstanding he has been kept upon the bromides constantly. I am inclined to think, from the presentation of the subject in the papers, and by the discussion to-night, that I shall give the preparation of gold and arsenic a trial at the first opportunity. It certainly offers us something where we need much.

Dr. Wm. Cheatham: I have used the bromide of gold and arsenic in one case; the man has atrophy of both optic nerves, and is also said to have syphilis. He has been on anti-syphilitic treatment, however, with no improvement. He took the gold, I think three weeks, but there was no preceptible change. Vision is reduced to 6-200. He has also had two courses of strychnia nitrate hypodermatically, with no improvement.

Dr. H. A. Cottell: I am sorry that I came too late to hear the essay; but take it that the remarks of Drs. Bailey and Cheatham set forth the facts pretty clearly. Their experience is the common experience of every man who treats such cases—their issue is very uncertain. A case of locomotor ataxia came under my care four years ago; the patient went through the hands of several physicians, growing worse all the time, and was finally forced to go to bed. He had lightning pains which were so severe that he was kept under the influence of morphine for a considerable time. Although the case was non-syphilitic he had been given iodide of potassium, in fact, I believe almost everything except the bromide of gold and arsenic. He finally went to Pennsylvania somewhere to see a priest who was said to work miracles. He was given a prescription of wine of coca and nitro-glycerine, and made a seemingly complete recovery, although to the practiced eye his gait is slightly ataxic. I had another case in the person of a Jewish man, a well-marked case of locomotor ataxia of syphilitic origin, at least such a history was elicited. This man seemed to be improving under iodide of potassium, and coming to me one day he asked if I thought it would do him good to go to the country; I told him I thought it would, if he would simply go there and rest; that he must not take much exercise. He went down in Breckinridge County, and while there fell in with an old-fashioned German doctor, who told him that his disease was not locomotor ataxia, but simply "inflammation of the spine." This doctor put him under treatment, applying poultices and plasters, and at the same time drugging him with herbs. The man grew rapidly worse, returned home, became bedridden, and I believed died. He was never able to get out of his bed after his trip to the country. What this country doctor did to make this patient grow so suddenly worse, I cannot understand. These two cases represent the two extreme conditions. We have all seen ataxic symptoms progress and diminish, oscillating between these two schemes. We see, however, many cases that have been moderately ataxic for years, and it is to be hoped that something has been found that will make an impression upon the lesions which lie behind the symptoms. One of the most discouraging things in the life of the specialist in nervous diseases, is that there is so little real therapy in the practice. In consequence of this the temptation to substitute quackery in this department for the principles of scientific medicine is great indeed. I am sorry to see that some eminent men in this country have found the temptation too much for them. If any remedy can be found that will make an impression upon scleroses, posterior, lateral or disseminated, of non-syphiltic origin, we all shall hail it with delight. At the last International Medical Congress, Strumpfel read an able paper on scleroses, taking the ground that the only curable cases were those of syphilitic origin. I hope that the bromide of gold and arsenic is the remedy we have been looking for. There is something very peculiar about the heavy metals like gold, platinum, etc. They have very little mechanical effect, as we know. It has been found that chloro-

form will take more gold in the presence of nitric acid, so that all the double salts can be made—chloride of gold and sodium, bromide of gold and sodium, etc. They are chemically I suppose what would be called double salts, yet technically they are not exactly double salts. As to what becomes of this medicine, whether it is eliminated by the kidneys as bromine, or whether the arsenic is turned loose in the system, or the gold eliminated as chlorine, would be interesting. It is something like the question brought up by Dr. Howard some time since—the treatment of goitre by the use of iodine under the plan known as electro-phoresis—he alluded to a point which will perhaps help us out. The idea was that iodine being driven in by galvanic current, the iodide of potassium was decomposed and active iodine turned loose in the substance of the goitre. It is a well-known fact that many beneficial results are obtained from elements in what we call the nascient state, and many chemical combinations may be effected in that way that would not obtain under different conditions. It is possible that the gold may carry a molecule of arsenic into the economy in this combination, and give it up in such way as to cause the arsenic to be more effective than it would in any other way.

Dr. T. H. Stucky: My sole object in showing these cases and in bringing the subject before the Society, was not to place myself on record that gold would cure these conditions, but it struck me as being a very peculiar coincidence that such marked results and such marked improvement should be manifested in so short a time. Out of a series of eleven cases of neurotic troubles in hospital and private practice, I have been surprised at the amount of improvement. One case is a very prominent man in a fashionable portion of the city, who has been living for a long time almost the life of a child, and who has been under the treatment of many neurologists. While visiting his wife, she heard of my having treated another case, and suggested the same remedy be given this gentleman. He had incontinence of urine, incontinence of feces, entire loss of control of the lower half of his body, lightning pains in the legs and over the region of the stomach, rest disturbed, and had been in about this condition for four years. I first gave him ten drops of mercuric bromide of gold and arsenic three times per day. He had to be lifted in and out of bed; his legs would become crossed in bed and his wife would have to uncross them at night; he would urinate involuntarily during the night; he was afraid to go out in his carriage, fearing he would have an involuntary evacuation of the bowels. He was given this treatment for two months without any apparent improvement, when I increased the dose one drop per day until I secured the effect of the arsenic; the dose was increased until he took twenty-five drops three times a day. He waked up one night complaining of a tingling sensation all over his body; I then ordered the medicine reduced to ten drops three times per day. His incontinence of urine has ceased; he has perfect control of the sphincter ani; he has considerable motion and strength in his legs, and can get up and down without assistance. There has been no further improvement, but certainly this has been a great advance over his previous condition. There is another point about this solution that has struck me with force—that is, its possible or probable usefulness in the treatment of glandular and joint troubles. It combines well with lime and salicylate of calcium. I have just had a case of enlargement of the cervical glands with calcareous change, which has been treated with bromide of gold and arsenic, with a decided reduction in the size of the glands. His father gave a syphilitic history, and this patient had been treated for syphilis. I have also tried this remedy on other cases of glandular enlargements, and have been surprised at the rapid subsidence. Another case, a prominent man who returned from Hot Springs some time ago, much emaciated, taking daily 450 grains of iodide of potassium; he also had unsteady gait and other nervous symptoms. The iodide of potassium was discontinued, and bromide of gold and arsenic administered. While there has been no marked improvement in his gait, there has been decided improvement in flesh. Another case gave the history of pulmonary hemorrhage, spitting of blood, yet there is no marked change to be found in the lung. She has been placed upon this agent, starting with four drops, increasing one drop every day, until she is in better condition and weighs more than she has in six years. These cannot be coincidences, and the cases I have referred to demonstrate the usefulness of this agent in the treatment of syphilitic lesions. We have had several cases of syphilis in the Clinic at the college that I did not refer to in my paper treated with this agent, in all of which there has been a more rapid subsidence of all symptoms than usually obtains under the use of mercury alone. There has not been the marked ptyalism, nor the marked retraction of the gums, and the eruption has dried up very rapidly. The fact then that it enters into combination with lime, that it enters into combination with mercury in the form of a solution and is probably eliminated by the kidneys shows that it has a decided advantage over the old chloride of gold and sodium, which was not readily assimilated. Experience thus far has proven that this solution has a great advantage over iodide of potassium in that it does not produce gastric irritation. None of the cases in which it has been used have exhibited any gastric symptoms: it has produced no interference with digestion or the secretions, and it not only seems to have an especial action upon the constitution, but proves to be a general tonic in its effect throughout the entire alimentary tract.

I have simply shown these cases with the hope that it might be of service in suggesting a new field of experiment. There is one more point upon which I would lay special stress. I made

the error myself a year ago when the first specimen was sent to me by Dr. Barclay of Pittsburg. We are inclined to discard its use too soon. We must push it like we do iodide of potassium for its full effect. I believe it is a good addition to our therapeutics, and that its outcome is destined to be a great one. Certainly it cannot be explained that these three cases I have exhibited, and the others that have been treated, would have improved so markedly without its use. It has not been my experience that cases of locomotor ataxia suddenly turn in three or four weeks without treatment into a condition of decided improvement. It has not been my experience that within three or four days cases showing evidences of involvement of the lateral columns begin to assist themselves. It is not my experience that cases of paresis of a certain lot of muscles begin to take on action, and that patients state that they can feel a tingling in that part, which I do not attempt to explain; nor do I attempt to localize its action exactly in these cases; I simply present the patients and give my experience in their treatment to emphasize my statement that I believe this remedy has a wide field of usefulness in the cure of neurotic conditions. I have used bromide of gold and arsenic in two cases of incontinence of urine; in one of these there has been decided relief. I would like to call especial attention to its service in the treatment of choreic conditions; we get not only the benefit of the arsenic, but the sedative action of the bromide and alterative effect of the gold. I have used it with success in three cases of chorea without any other treatment.

LIFE IN THE CELL.

BY JAMES A. CARMICHAEL, M. D., NEW YORK.

THE HUMAN OVUM.

TO regard the human ovum simply as a cell—as we propose to do—is, at once, to assimilate its primitive condition with that of any other cell, viz., that of a plasmic deposit that shall constitute the primordial nucleus, from which shall emanate any and all subsequent processes of evolution, the ultimate results of such processes to be determined by the nature and needs of the creature to be created. We have abundantly seen the operations of the same inflexible creative law in all living things in their various and multitudinous forms, from the primeval protozoic, and onward to the vegetable and animal, and all held together in an unbroken continuity, because of the identity of the source from which they have sprung and to which they owe their being, viz., the mysterious potentiality of creative cell force. We look abroad upon waving fields of grain, slowly ripening in the sun, and giving promise of the abundant harvest that is soon to reward the patient and hopeful toil of the husbandman. We stand at the base of the towering oak, honored, it may be, as having been the silent witness of passing generations of men, and held in ancestral reverence from one generation to another, as life succeeds life along the stream of time. We seek the friendly shelter beneath the tremulous leaves upon his gnarled and knotted arms, that intercept the fierce noonday heat, and woo us to sleep in his grateful shade. How many of us ever think of the minute little spherule that, sown in the earth, becomes instantly vivid with life, and begins the wondrous work that in due time will yield us food for our bodies in the one, and, in the other give protection from the storm that has suddenly swooped down and holds us in the strong grip of elemental strife. The grain and the oak have come forth, the one to nourish, the other to protect, in obedience to the same irresistible power that compels life wherever life is.

In pursuance of the plan proposed in the consideration of the human ovum, the first step in its investigation must be as to its anatomy. It is not necessary for our present purpose to enter upon a lengthened description of the minute anatomy of the ovum, such, for example, as would embrace its connections with the Graafian follicles, the Wolffian bodies, the discus or cumulus proligerus, the associations of each ovum with the ovary, etc., etc. All these are physical anatomical facts of ordinary education upon this subject, and easily within the compass of the usual instruction in books upon anatomy and physiology. Our specific object must be as to the nature of the ovum itself, and consistent with the idea of its identity with the innumerable host of the vitagenic cells, whose vitagenic operations we have seen ever since life began back in the remotest period of terrestrial existence in the knowledge of man, the period that witnessed the feeble manifestations of protozoic and palæozoic life. What then is a human ovum? We answer, a cell to all intents and purposes, and of a highly organized type. What makes it a cell? We enumerate, 1st, its external transparent membrane, known as the vitelline membrane, zona pellucida, etc., covering and enclosing; 2nd, granular mass, the vitellus or yelk; 3rd, a large, clear nucleus, the germinal vesicle, and 4th, a nucleolus or germinal spot. Ever since the discoveries of Schleiden and Schwarm, the definition of the cell has undergone but slight variation, and that given above is the most recent interpretation of the integral physical structure of the ovum; the term ovule is in use, but it is only as to conditions of the ovum when fecundated or non fecundated. Our next step leads us to the investigation of the ovum cell as regards its contents, and their respective receptivity of the principle of fecundation, in other words, the physiology of its impregnation and fecundation. Let us examine each element of the ovum cell individually, beginning from without inward, and see if we can arrive at any probable knowledge of the part that each one takes in the performance of the two most important functions which we know are specifically and exclusively ovarian, viz., those of menstruation and the reproduction of human life.

The first physical element of the ovum cell is its external transparent membrane, enclosing and protecting the other elements constituting the cell. If we seek to assign a reason for the existence of this membrane, it is easy to be instructed by an inquiry into its functional operations in the very earliest and simplest forms of palæozoic life. Says Dr. Mitchell, from whose admirable work upon "The Evolution of Life" we have so frequently and advantageously quoted, in reference to the protection of the protoplasmic masses or cells which constituted the beginnings of life in "The Palæozoic Age:" "They, the protoplasmic masses, needed an outer covering to protect their soft and delicate bodies, and the formation of a cell membrane was the next step in the process of development. This membrane could perform the office of an absorbent and take from the water the nutrient materials necessary for the cell growth." Then came cell propagation and multiplication by contraction of the cell membrane. We have sufficiently adverted to these protozoic operations in our earlier investigations upon this subject, and reintroduce them here to show the utility of the cell membrane, not only in the earliest manifestations of life, but a corresponding utility through all the gradations of existence, onward and upward to the very highest form of life, the human. What are the uses, then, of the external membrane, the zona pellucida, or vitteline membrane of the ovum cell? As the thickening and organization of the atoms on the outer surface of the cell resulted in the formation of a membrane for palæozoic protoplasmic masses, so the zona pellucida "appears as a transparent ring in the mass of cells in which the ovum is imbedded. The primordial ovum has, at first, no special investing membrane; but as it develops it presents a single layer of columnar cells, which, by undergoing a sort of cuticular transformation, become finally the vitelline membrane." This last is the definition of the mode of formation of the protecting membrane of the human ovum, given by distinguished authority of most recent date, and we call the attention of the reader to the almost absolute identity of the same process in the very earliest forms of life that appeared upon the surface of the earth. Another item of comparative morphanthropological development occurs just here. Our little protoplasmic masses of protozoic life underwent propagation and multiplication by contraction of the cell membrane; so does Haeckel's segmentation of the vitellus result in "its division into a large number of cells and the formation of what are called the blastodermic cells, until the entire vitellus is divided into small cells, which at first have no membrane, but a membrane is soon formed, a nucleus and nucleolus appear, and the cells are perfect." A few words in relation to certain pores or perforations of the vitelline membrane, called by Barry and Kleber "micropyles" (*μικρος πυλη*) little gates, through which are introduced into the vitellus those vivid elements of the seminal fluid which are now regarded as the animating principle of the fecundation of the ovum. In the books upon cellulology we read a great deal about the nucleus and nucleolus of the nerve cell, for example, and much stress is laid upon their presence in the ganglia and in the nerves that possess a distinctive quality and force of ganglionic and nerve dispensation. By their presence and by the intensity of the vital force that emanates from them, they seem to impart to the portions of the body to which they are distributed functional vitality of unusual character. In our investigations upon "Nervous Matter" in former numbers of this journal, we considered these specific nerve and ganglionic forces "in extenso," and especially among the ganglia and nerves of the special senses. So we are at liberty to conclude that wherever there are seen nuclei and nucleoli forming the integral elements of cells we may rest assured that life is there in its most intense and highly developed form, and that the organ or organs supplied by them are always capable of the highest and most perfect functional activity. Now, to make application of this organic fact to the nucleus and nucleolus of the human ovum. For the minute description of these elements of the ovum, we refer the reader to any standard work upon physiology. All that we desire in the present connection is to call his attention to the nucleus and its attendant nucleolus of the ovum cell as being the very essence of "life in the cell," where life lies dormant until awakened by the force that is congenial to it, and that starts it forward on its work of procreation, and begins the vital activities that shall finally project a human being into the world. In the vitelline mass there is visible a germinal vesicle —"the vesicle of Purkinje," which is the enlarged nucleus of the primordial ovum, and a dark spot —the nucleolus—called the "germinal spot of Wagner." To indicate its vivid vitality and receptivity of seminal impression, it is also called the "macula generativa," punctum resplendens, etc. Now our ovum cell awaits the coming of the generative stimulant—the seminal fluid—whose quickening influence shall arouse all its hidden energies, and at once it leaps into vigorous life.

THE SEMINAL FLUID.

The above term is used to express the agent by which the female ovum is fecundated, and which stimulates it with the vitality that is to animate the creature that proceeds primarily from the ovum, and after passing through its various stages of development, assumes the characteristic form which fits it for extra uterine and independent existence, and ever after distinguishes it. The term seminal fluid does not seem to be exactly correct, when taken in the sense of its fecundating power. It is not the fluid that fecundates and impregnates the ovum, but an element in the fluid, and of which the fluid is the vehicle for its transmission. Viewed anatomically, the seminal fluid proper contains no fecundating principle, but consists of

secretions from various sources, from the mucous glands in the dilated portions of the vasa deferentia, from the vesiculæ seminales, which contribute "an abundant secretion of a grayish fluid with epithelium, small colorless concretions of nitrogenized matter, called sympexions by Robin, and a few leucocytes, from the prostate gland, the glands of Mèry and Cowper, and from the racemose glands of Littre, located all along the urethra." The true and only fecundating principle is in an element of the seminal fluid, which *seems* to be endowed with life, but it is only seeming. The original name given to this element upon its discovery designated it as possessing life, and it was called "spermatozoon," and when considered numerically, spermatozoa *σπερμα, ξοον*, a living animalcule in the seminal fluid. But now more advanced scientific thought denies the vitality, but consents to the resemblance, and hence the adoption of the present term "spermatozoid" *σπερμα, ξοον, ειδος*, like a living animalcule in the spermatic fluid, and the spermatozoids are now described as "peculiar anatomical elements, endowed with movements, like ciliated epithelium." Now, we do not propose to repeat a twice-told tale to our professional reader, and tell how the spermatozoids, from being originally motionless within the testicles, upon ejaculation from those organs, suddenly become, as it were, instinct with life and motion, especially upon arriving at the vesiculæ seminales, where many frequently tarry, seemingly to recruit their vigor before proceeding ovumward. Nor do we propose to follow them through vagina, uterus, fallopian tubes, etc. But on their arrival at the periphery of the ovum, we shall critically watch them as they creep through the pores of the vitelline membrane, the micropyles, little gates of Barry and Kleber, and we know that their mission is impregnation, and that a human life is just about to begin. And now the mystery of mysteries confronts us. What is there in this restless crinoid thing, wriggling with ciliary and amœboid motion, as we can see at any time in a horse hair in still water, to start a human life? It's humiliating to think that we owe life to a thing with "a flattened head, and a long, tapering, filamentous tail." Better to come from an ape, accept the situation at once, and be content to go back to Miocene, Eocene, or Pliocene times, and grin and jabber with the Koola Kamba, the Nschiego Mbouvè, and other anthropomorpha in their native African wilds or round about Sumatra and Borneo. "Lord. what is man, that Thou art mindful of him! or the son of man, that Thou visitest him?" But we must abide the decree, so let us make the best of it, and try and find out what it all means, if we can!

"What is writ, is writ,
Would it were worthier."

We're in search of truth. The old saw says: "Truth lies at the bottom of a well," a figurative expression to indicate the difficulty of getting at it. How often do we see this in life, and how often does it happen that when we do get at it, it is so ornamented and festooned with lies that it's "Hobson's choice" which to accept, and we're in danger of realizing the experience of Rochefoucauld, "Il n'y a que la vèritè qui blesse,"—It's only the truth that wounds.

We are told by authority that "the spermatozoids are the essential male elements of generation, and these are produced in the substance of the testicle, by a process analogous to that of the development of other true anatomical elements." As we have already said, our ovum cell awaits the coming of the generative stimulant, whose quickening influence shall arouse all its hidden energies. Though it comes "in such a questionable shape," yet it must needs be welcomed, and the fertilizing principle which it brings must be accepted. But what is a spermatozoid, whence does it come, how is it generated, of what is it made, and, most vitally important of all, how does it impregnate and generate? To the first three of these inquiries we append the response, given by authority as the most recent interpretation of the history of the spermatozoid, but as to the two last, and by far the most important, we find no response worthy of the name. We give them in regular order, and to the first, viz., What is a spermatozoid? we have already given the answer: That "a spermatozoid is a peculiar anatomical element endowed with movement like ciliated epithelium." It will be seen at once that such an answer, as our reader will agree, is both indefinite and unsatisfactory, and, therefore, leaves to us the liberty of speculation as to the definition of a spermatozoid, of which we shall duly avail. To the second, Whence does it come? we have a more definite answer, and we give it, by authority: "Before the ages of puberty, the seminiferous tubes are much smaller than in the adult, and they contain small, transparent cells, which in their form and arrangement resemble epithelium. As puberty approaches, however, the tubes become larger, and the contents change their character. The walls are then provided with spindle-shaped cells, with a nucleated, protoplasmic lining, sending prolongations into the interior of the tube. These prolongations afterward break up into little rounded bodies, called spermatoblasts, a part of each one of which becomes the head of a spermatozoid.—Ebner. Between the prolongations are the so-called spermatic cells. The spermatoblasts send out, each one, a short process, which forms the intermediate segment of the spermatozoid, and from this a long filament is developed, which forms the tail. The spermatozoid is detached when its development is complete." To the third question, How is it generated? there is, as we see above, some definiteness in the interpretation of the beginning of the spermatozoid. There yet remain two questions to be solved, viz.: Of what is a spermatozoid made? and lastly, How does it impregnate and generate?

In the answer to these two last questions lies the pith and kernel of the whole matter. Accord-

ing to the definition given by Ebner of the spermatoblast, which name he uses, we presume, from due knowledge of its Greek derivation, *σπερμα*, *βλαστος*, or *βλαστεμα* a sperm bud, just as the term osteoblast, a bone bud, is used—the head of a spermatozoid is made of a sperm bud or buds, the body of the same, and finally, a long filament develops the tail from the same source. The spermatozoid, then, is the creation of sperm buds, originating in, and projected from the spindle-shaped cells on the walls of the seminiferous tubes. If this be so, then here is another illustration, and a very vital one, of "life in the cell." Now then, we have so abundantly seen that there is absolutely no end to the generative capabilities of that wondrous thing called the cell. Here, in this instance, a sperm bud is conceived, matured and finally emerges from the body of its parent cell. What is it, an animal? No, they say not! But it seems to have life, and pretty active too! For very soon after it leaves its birthplace in the seminiferous tube, it begins to give evidence that it is quite able to take care of itself, and to go about the business appointed for it, the procreation of a human life. Might we not suppose that commensurately with its own primitive activity, will be the activity of the product of its own potent creative force? And here a question of immeasurable interest rises up before us to perplex our mind, and to make us feel, but too keenly, the feeble shortcoming of our mental scope and apprehension. We have but to name it, that our reader may easily understand and appreciate our embarrassment, but we will name it, and ask this momentous question. In view of the intensely vital force of this living matter, now on its way to start a life into life, and in view of the intensity of its own vitality, being in direct relation with the source from which that vitality comes, if that parent source be strong and vigorous, both mentally and corporeally, or conversely weak and feeble and impotent, is it *here* that *heredity* begins, and is it here that the awful decree, "The sins of the fathers shall be visited upon the children" descends upon a life, not yet inchoate, but hastening to begin, and due in time be sent into the world, adorned with the gracious perfections of the "mens sana in corpore sano" or "half made up, and not fit to court an amorous looking glass."

Then, divested of all theoretic speculation, we believe that a spermatozoid is nothing more nor less than intensely organized living matter, the product of intensely vital sperm cells, endowed with life and motion, and migrating from testicular sperm tubes, impelled by a directing force, ciliary, vermicular, and muscular—voluntary and involuntary, a combination of emotional, ganglionic and cerebro-spinal nerve force, hastening to its destination with a directness of purpose, and a final consummation of that purpose, that must always remain one of the mysteries, as yet unfolded, of organic life, and challenging the acutest perception of man. Our next, and final investigation of cell force, will consider the modus impregnandi of the spermatozoid, the receptivity of the ovum, and after a rapid survey of fœtal cell development, conclude with cell functional activity in the perfected organism of man.

THE RECENT TYPHOID EPIDEMIC AT MONTCLAIR, N. J.

By Herbert West Foster, M. D.,
Montclair, N. J.

THE publicity which the newspapers have given this epidemic leaves to me but to mention some facts, which for the medical profession will have special interest, as from them we may study, with perhaps some profit, the question of the length of time required for the incubation of this malady, as the source of the trouble was so soon found, and as we have the data showing the time limits of possible infection from that source; also the time at which each individual case developed. I will also give an outline of the cases that came under my care, and briefly the treatment employed.

On Feb. 28, 1894, Wm. Gould, son of a farmer living in a neighboring town, and running a milk route into Montclair, was found to have been suffering from typhoid since the 11th.

The first case was found in Montclair on March 12th; he had been suffering for two or three days. A second son in the milkman's family developed the disease on March 15th. The last milk sold in Montclair from the infected dairy was on March 30th. The last case reported was on May 8th. There were, all told, 117 cases of typhoid fever, of which 90 were in Montclair; the others were either in neighboring towns or left the town during the period of incubation. The bottles in which the milk was delivered were washed with water from a well which afterwards was found to be thoroughly infected with typhoid germs. Among the 117 cases, the entire epidemic, there were 14 deaths, making the death rate a little less than 12 per cent.

The following is a brief outline of the cases coming under my care.

Case I.—Girl, sixteen. Had enjoyed good health previous to this illness. Was taken March 25th with neuralgic pains in the head and cardiac region. Temperature 102°, and gradually rose so that on the evening of March 31st (seventh day), it was 104°—pulse regular and strong—104 to 116. During the second week the temperature ranged from 101° to 104°—pulse 80 to 100. The patient was dull and apathetic; the neuralgic pains gone. Third week: temperature quite variable, from 101° to 104°; abdomen distended, some diarrhœa. During the fourth week the temperature gradually came down, at the end of the week being from 97.8° to 100.8°. She was exhausted and willing to remain in bed. During the fifth week she sat up in bed every day for awhile. During the sixth week she developed periostitis of the right tibia, but is now convalescent.

Case II.—Boy, eighteen. Taken March 26th. Seemed drowsy and complained of headache and slept a good deal. Temperature 103° (axillary). During the first week the morning temperature ranged from 102° to 103.2°; evening, 103° to 104.5°. Pulse was regular but variable, being at times 76, then, within a half hour, 100 or more. During the second week the temperature was from 103° to 105°, tongue dry and cracked, and toward latter part of the week the abdomen became distended; the first sound of the heart began to grow indistinct and the rapidity of the heart's action began to increase, neither of which symptoms could I help materially with stimulants —brandy, digitalis, strophanthus, strychina and ammonia, all having but temporary effect. Cold sponging and the cold wet pack were used freely, which would lower the temperature temporarily, but he continued to grow worse until April 12th, the seventeenth day of the disease, when he died, having been quite rational during the last twelve hours of his life.

Case III.—Boy, twelve. Came to my office on the evening of March 30th, with temperature of 104°. Said he hadn't been feeling well for several days. During the first week, in the morning the temperature was from 102° to 103.2°; evening, 102° to 104°. During second week, April 5th to 12th, temperature was from 101.4° to 104.2°, pulse all through being quite slow and peculiarly hesitating in character. During the third week, temperature 98° to 100.2°, and he was quite comfortable. During the first six days of the fourth week temperature was from 98° to 100.2°, and convalescence seemed almost established; but on the evening of the sixth day the temperature was 101.2°, and on the evening of the seventh it was 103.2°, he showing every indication of a relapse. During the fifth week the temperature ranged from 101.6° to 105°; pulse 84 to 106, at times irregular, often intermitting, and the first sound of the heart was rather weak. During the sixth week the temperature averaged about 102°, gradually lowering, and the patient gradually improving. During the seventh week it was practically normal, and convalescence became established. Brandy was used freely in this case. He was quite constipated during the first two weeks, then had some diarrhœa, but at no time much distension. He was peculiarly dull and listless from the first, and during convalescence very pale and weak, and temperature quite apt to be subnormal.

Case IV.—Woman, thirty, taken March 29th. Evening temperature, 103°, it varying during the first week from 99° to 103.2° Some slight delirium at night. During the second week the temperature was from 100° to 102°; patient very dull and lethargic; some abdominal distension, and slight involuntary diarrhœa if she moved herself about the bed very much. During the third week she was practically convalescent, and during the fourth week she gained in strength very rapidly.

Case V.—Little girl, six, always had had good health; been feeling somewhat ill for several days, and on March 30th, when I first saw her, had a temperature of 102°; pulse, 125. Was dull and listless; complained some of headache. Morning temperature during first week was from 99.4° to 103°; evening, from 103° to 105°. During the second week the temperature was comparatively even, being from 102° to 103° mostly. During the third week it soon reached about 99°, where it remained, with very slight variations, during the fourth week, after which she gained in strength rather slowly.

During the second week there was some abdominal distension, but the heart was strong all of the time. Constipation and mental and physical sluggishness were marked all through.

Case VI.—Woman, seventy-two. On evening of March 31st she had a temperature of 104°; pulse, 96. She seemed very bright and hopeful. Bowels were constipated. During the first week the temperature was 102° to 104°; pulse, 74 to 100°. On the sixth day she had a little diarrhœa, which soon became more profuse and involuntary. On the eighth day she became somewhat delirious, and on the ninth day the lower lobe of the right lung was becoming badly congested, and on the eleventh day she died of complicated pneumonia, having been unconscious for twenty-four hours.

Case VII.—Little boy, four, taken on the morning of April 1st; had a temperature of 102.5°. It ranged during the first week from 99.8° to 103°. During the second week it reached normal, and never went above that point after the fourteenth day. He was quite comfortable all through, having a very mild attack.

Case VIII.—Woman, thirty-two. Taken March 29th. Thought she had grip; pains in back, legs and head. Temperature, 102° During the first week the morning temperature was from 100° to 103°; evening, 102° to 104.5°. Second week, temperature, 102.5° to 104.5; third, 100.5° to 104.8°; fourth, 102.5° to 105°; fifth, 99.5° to 102°; sixth, 97.4° to 101°; seventh, 98.5° to 102.5°, she having a slight relapse. The pulse and respiration kept pace with the temperature, except during the fourth week, when the pulse was proportionately high. Very slight delirium began on the thirteenth day, but it wasn't bad until the twenty-sixth day, from which time until the thirty-eighth day she was not rational at all. During this time she had most terrible abdominal distension, which she thought was due to pregnancy. She also got the idea that her husband had furnished a house for the family in a neighboring town, and that they were about to move into it, and was completely surprised when she afterwards found herself mistaken in this as well as many other ideas framed during the delirious state.

The temperature chart for this case shows nineteen consecutive days in which the temperature was, at some time during the day, 104° or over. Convalescence seems now (May 19th) well established, and quite rapid, considering the severity of the case.

Case IX.—Boy, fourteen. Taken April 2d with neuralgic pains around head and chest. Temperature (evening), 102°, and during the first week it was from 100.4° to 104.4°. Pulse, 72 to 96. During the second week the temperature was also quite variable, being from 98.4° to 103.8°; pulse from 56 to 74. During the third week, the temperature was from 98° to 100.8°; pulse, 46 to 70. During the fourth week the temperature was about normal, pulse being from 58 to 78. During the fifth week he wasn't quite so well, temperature rising at times to 100°, but now is convalescent. This boy had a peculiar, slow, hesitating pulse, that often intermitted, and was quite variable. He was delirious, not violent, but rather quiet during the second week; no delirium after that.

His abdomen was quite distended during the second and third weeks. He had a very little diarrhœa during the third week; was constipated most of the time.

From comparing notes with some of the other physicians in town, I am able to mention some general symptoms noticed in the epidemic.

Several were troubled with apthous sore mouths quite early in the disease. Some of the women had what resembled menstrual discharge, instead of the nose-bleed which others had. Several had atony of the bladder, and had to be catheterized from almost the beginning till convalescence was well established, while others suffered from depression.

As a general thing, the patients were constipated for from one to two weeks, when they were apt to have diarrhœa, and lose control of the bowels, and others lost control of both bowels and bladder quite early.

Some were quite comfortable, but apathetic from the beginning, while others were irritable and restless all through. Deaths were mostly from cerebral complications, intestinal hemorrhage, complicating pneumonia, or from collapse due to the virulence of the poison.

Treatment.—The dull, apathetic condition, moderate thirst, constipation, etc., of most of my cases seemed to call at first for bryonia. The very few that set in so violently at first, accompanied with so many neuralgic symptoms, seemed to need belladonna. Later, in the abdominal distension and prostrated condition, china seemed to help. Arg. nit. did good service where there was much distension and diarrhœa, especially if it was bloody and full of mucus, and of a bad odor. Arsenic seemed called for late in some cases, with restlessness, thirst, and gastric irritability. Arnica also seemed frequently indicated after the second week. Hyoscyamus helped the delirium often, also stramonium, when the renal excretion seemed not very free. Baptisia, lycopodium, gelsemium and nux were all called for at times. Phosphorus and china helped much in convalescence.

Water acidulated with muriatic or phosphoric acid was used during the fever, and was much liked by the patients. Digitalis, two parts, and strophanthus, one part, five to fifteen drop doses, every two to four hours, steadied the heart muscles. Strychnia tablets, $\frac{1}{60}$ grain each, were used every two to four hours when the heart was slow or hesitating, and in one instance pushed till muscular twitching was noticed, which stopped on increasing the interval between the doses. Brandy in milk was the principal alcoholic stimulant used. Wyeth's malt extract, diluted with water, made a very agreeable and useful beverage. Milk, at short intervals of course, was the principle article of diet. When the abdomen was badly distended, peptonising the milk helped some, but not so much as Horlick's malted milk. Eucalyptol and oil of origanum were both used for distension, without much benefit. Rudisch's sarco-peptone was the principal beef preparation used, both during the fever and convalescence. When there was much rectal uneasiness, a glycerine suppository usually produced a movement which was very relieving.

At no time did I allow the bowels to become very much constipated, which I think may have had something to do with my not having hemmorrhage of any account in any case.

CLINIQUE.

STRANGULATED HERNIA—HERNIOTOMY.*

By W. L. Rodman, M. D., Louisville, Ky.

At the last meeting of this Society, I reported a case of strangulated hernia and exhibited a specimen showing an incomplete hernial sac, a radical operation having been performed a few days before. I remarked at the time that it was the only case I had ever encountered where there was an incomplete sac. The patient has made an uninterrupted recovery, never having had a bad symptom since the operation.

A few days afterward, as is always the case, I was called to operate upon another strangulated hernia, in a man forty-five years of age, who had been the subject of right inguinal reducible hernia for years. It came down last Wednesday morning a week ago, and after several unsuccessful attempts to reduce it he began vomiting, and as he was suffering a great deal of pain, called his family physician, Dr. Proctor. The Doctor made several attempts to return the hernia and failed. He then sent for me, and I found the patient vomiting, suffering intense pain, with a tumor as large as a child's head, very tense, and evidently containing quite an amount of the intestine. He was put under chloroform, and another unsuccessful attempt made to reduce the hernia. A herniotomy was then performed; a large amount of intestine, both large and small, was found in the sac; the gut was found to be in a very healthy condition, but dis-

*Stenographically reported by C. C. Mapes, Medico-Chirurgical Society.

tended with gas; consequently, after relieving the constriction it was returned. Then, after dissecting the sac from the surrounding tissues, to which it was very densely attached, especially to the upper part of the testicle and to the cord, it was cleared well up to the neck, and I threw a ligature around the sac, after first satisfying myself that there was nothing in it, and twisting it upon its axis I then turned the sac over to an assistant to hold and drew the ligature down as tightly as I could. I did not recognize the fact that any of the viscera or contents of the sac were embraced in the ligature at the time. I cut the sac high up, as is usual in such cases, and removed it. Examining the sac I saw at once that I had cut something else, and it was only a second before I was able to satisfy myself without any doubt that it was the appendix. I loosened the ligature as soon as possible, thinking I could grasp the appendix before it would escape me and get back into the abdominal cavity, but I was unable to do so. At the same time I cut the appendix I also cut a small vessel which spurted very freely, and I recognized at once that nothing short of enlarging the incision freely, bringing down the intestine again, searching for the appendix and ligating it, was to be thought of. So I rapidly enlarged the incision, pulled down the gut, and had no trouble in finding and ligating the appendix. I learned then that it would hardly have been possible to have avoided cutting the appendix in removing the sac. The appendix was adherent to the upper part of the neck of the sac. Evidently the cæcum had been in the hernia and had been reduced from time to time, but the appendix had become agglutinated to the wall of the sac. The peritoneum was sutured to with silk; the muscles were also united by buried sutures of silk; the superficial wound was brought together and united with interrupted sutures. The patient did very nicely, has not had a bad symptom and is now out of danger.

I speak of the case simply to bring before the Fellows one of the accidents that may happen in herniotomy. My attention was first called to this by an article written by Dr. W. T. Bull, of New York, in which he very candidly acknowledged having done injury to the gut in tying the sac. He recognized the fact that he had embraced something besides the sac in the ligature, and as soon as he detected this he of course untied the ligature and returned the gut, thinking that he had not done sufficient injury to it for any after trouble to result; but the temporary strangulation was sufficient to cause ulcerative inflammation, which resulted in perforation of the gut and fatal peritonitis.

I have always been very careful in freeing the sac from the surrounding tissues, making sure that there were none of the viscera embraced in the ligature, and was very much puzzled to know how I could possibly have cut the appendix until a further examination showed that it was adherent to the sac. I am satisfied in my own mind that accidents of this character occur not infrequently in herniotomy, and escape detection at the time. It is the first time that anything of the kind has occurred in my practice, so far as I know, and I am glad that the patient made such a good recovery.

CORRESPONDENCE.

MICHIGAN HOMŒOPATHS.

An esteemed correspondent says: "I enclose clipping from *Detroit Free Press* of even date, defining the attitude of Michigan Homœopaths upon a subject in which the TIMES is the pioneer.

When it is recalled that the president referred to was the author of a resolution little over a year ago, censuring Dr. Obetz, of the Michigan University, for advocating the union of the schools of medicine at Ann Arbor at the expense of dropping the name Homœopathic from that institution, and that this same State Society one year ago denied the friends of Dr. Obetz the privilege of the floor to defend him, and that these same gentlmen having failed before the Board of Regents of the University of Michigan in having Dr. Obetz removed from the faculty, for his plan or "scheme," whereby the name Homœopathy was to be sacrificed, carried it to the American Institute asking his expulsion—when all these things are recalled, the old colored preacher's statement that 'the world do move' would seem true." The following is the clipping:

"We heartily indorse the glowing tribute paid by the president to the memory of Hahnemann. The literary and scientific attainment of the founder of our school of medicine, as well as his devotion to the cause of humanity, place him among the greatest reformers in history, and humanity is to be congratulated to-day upon the improved therepeutics and more humane and rational practice that have been brought about by the benign influence of Homœopathy. Its safe, speedy and certain results at once demonstrate the superiority of the law of similars enunciated by Hahnemann, over the injurious, irrational and empirical practice of that time; so that to-day it holds a warm and abiding place in the hearts and minds of the people, where every opportunity for fair and intelligent comparison of the two methods has been afforded. If the practice and therapeutics of our brethren of the traditional schoo of medicine is better to-day, it is not so much because it is less experimental and haphazard than before, but because it is more safe, humane and more rational.

"We are in accord with the president in his denial of sectarianism in the sense implied by our friends of the dominant school, but in the sense of firm belief in, and adherence to, principles and system in medicine, we are willing and must be sectarian. That we have a distinctive title to-day is because we have been so designated by our opponents; that we have separate organizations to-day is because we were persecuted and driven out of the existing medical societies and organizations, leaving no recourse open to us but the formation of societies and colleges in which Homœopathy may be discussed and taught in addition to traditional medicine.

"We warmly recommend the expressions of liberality and tolerance indulged in by the president toward all educated and legitimate practitioners of medicine, regardless of their individual or peculiar medical and scientific opinions, and reaffirm his statement that when our brethren of the dominant school revise their code of ethics so as not to exclude men of equal ability and scientific attainments with themselves, from fraternal association and recognition, they will then be in harmony with the broad principles of our republic, and will have removed all necessity for separate organizations and associations.

"That we are in active sympathy with the president in his exhortation to loyalty and adherence to our principles and cause. That indifference and apathy never has and never will accomplish any desired good, while steady and unswerving fealty to any worthy cause will sooner or later command recognition and compliance."

SQUIBB'S ARSENIC ANTIDOTE.

Messrs. Editors:

Your postal card of March 14th is received, and in reply we would state that we have no special directions to give you in regard to our arsenic antidote, for there is nothing peculiar in it. It is simply the officinal ferri oxidum hydratum cum magnesia put up in such quantity that it will be found sufficient for any ordinary case of arsenic poisoning. You will find all the particulars in the "U. S. Pharmacopœia of 1890."

Yours truly,

March 22, 1894. E. R. SQUIBB & SONS.

YOUTHFUL MEDICAL OPINIONS.

To the NEW YORK MEDICAL TIMES:

Your funny story of the little girl who informed her playmate regarding the *fons et origo* of *babies*, and that their obese family doctor was "*just full of them*," recalls to mind one of the droll incidents of my own practice. There had previously been a case of twins in the family, from which one of the little girls had evidently concluded that babies, like gloves and shoes, always came in *pairs*. The day after I had safely delivered the mother, the good neighbors, coming to offer congratulations, were accosted by the aforesaid little girl, whose face betokened an amused disgust: "Dr. Morgan brung mama a little *baaby*, and he never brung her but *one!*"

W. F. M.

MEDICAL NOTES AND CRITICISMS.

MEDICAL SOPHISTRY.

It is remarkable with what tenacity the average mind clings to preconceived ideas and antiquated modes of thought. Ideas having no predicate in natural philosophy, or no postulate in science, that is to say, no data of observed facts to rest upon, possess in such minds all the force and authority of truth.

It was but a few centuries ago that the mythical Fall was accredited with all the woes of the world—with everything inimical to man in the world without, and everything vile or vicious in man himself. So great a man as Constantine thought that the Fall had cast a blight on the face of nature itself, and he attributed the viruses of the vegetable kingdom to that portentious event. And so versatile a man as the late Prof. Charles J. Hempel "catches on" to the "idea" of the great Christian prelate and emperor, as a predicate of many "abstruse" and idle deductions. Thus says this ingenious sophist:

"The moral transgression tainted the physical creation, and the forces of disease were the inevitable result. But God could not permit these morbific forces to pervade creation like wild and lawless furies seeking whom they might destroy. He subjected them to the laws of order, by compelling them to fix themselves in definite, concrete forms. Thus it is that medicinal agents embody or materialize, so to say, morbific forces, themselves resulting from man's original transgression, and perpetuating themselves with the hereditary consequences of this transgression in man from age to age and generation to generation."—*Materia Medica and Therapeutics. Third Edition. Introduction; p. 8.*

This affords an excellent illustration of the loose meanderings of a mind cast adrift on a sea of rudderless speculation. Having an assumption for a postulate, it rears a superstructure as frail and as ephemeral as a bubble, as devoid of utility. And how narrow and misleading is the conception, that the magnificent flora of the earth was blighted and became morbific, that it might be Homœopathic to the physical woes of man, woes which are legitimately generated by imperfect environment, and man's inability, by reason of ignorance, or want of knowledge, to adapt himself to it; or in other words, by his want of knowledge of the laws of his environment! It is the old mediæval idea over again, which conceives, with bombastic conceit, man as the centre of things, for whom everything was created, and judges things as good or evil, virtuous or vicious, according as they affect him for weal or woe. A mind contracted to the measure of such a conception could not imagine that the floral kingdom had any uses in the providence of nature but to furnish Homœopathic medicines for the cure of disease!

Another illustration of the same vicious system of applying theories predicated on fiction may be found in an article by Prof. Charles S. Mack, written expressly for the *North American Journal of Homœopathy* for April, 1894. The article in question is an attempt to discriminate between superficial and radical antagonisms in the cases of dynamic drug effects. The writer overlooks, from first to last, the agency of nature in the phenomena produced by the exhibition of a medicine. He assumes that nature is passive, and gently submits to be the arena in which the drug forces may play their dynamic pranks, illustrative of the laws of *similia similibus curantur* on the one hand, and *contraria contrariis curanter* on the other. The article is a curiosity to the reflective reader, abounding in all the exuberance of hair splitting sophistry which characterized the mediæval period.

Take for example, the following:

"I take it," he says, "that when modification of vital processes is among the effects of chemical properties in a drug, immediate chemical changes (in tissues, secretions or excretions) precede such modifications; and that physical or chemical changes caused by a drug's dynamic properties, are secondary to its immediate effect upon vital processes."—p. 207.

The writer conceives of two kinds of dynamic antagonisms in drug actions, the one superficial, the other radical, and finally concludes that there is no such thing as radical antagonism. He speaks, also, of "the *quality* of vital processes," to explain degree of force of vital processes, and with doubtful propriety refers constantly in foot references to his own not over luminous writings.

But the evident trend and purpose of the article are to show that "a drug may be in greater or less degree a similar, *i. e.*, may be more or less Homœopathic."—p. 211.

Similia is a comparable adjective, while *idem* is not, he says. This is true, of course, but it is the inference which the writer renders legitimate, perhaps unwittingly, to which we wish to call attention, namely, that a drug being more or less Homœopathic, may be more or less curative. The old rule that used to be insisted on was, that a medicine must correspond to the totality of the symptoms present in a case of disease, in order to be curative. Hahnemann's idea of *similis* was that the drug symptoms must be *like* the disease symptoms; not the same, that is, not arising from the same cause, as in isopathy, but, having a different cause, the symptomatology and the pathogenesis must be exactly alike; in other words, that the totality of the symptoms of each must correspond in order to fulfil the requirements of Homœopathicity, or the conditions of curative action.

If a drug may have any curative sphere in a case to which it is "more or less Homœopathic," the practice of Homœopathy becomes greatly simplified. The *like* that cures may be as unlike as Prof. Mack's *contraria opponendum*. A dozen or more drugs may be more or less Homœopathic to the same case, and each may be administered in succession, after the manner of some of the earlier, but discredited Homœopaths, to effect the cure, or an abatement of the disease-symptoms. It would follow, also, from this predicate, that every drug in the Homœopathic materia medica is more or less Homœpathic to any disease that may be found catalogued in our nosologies, and, ac-

cordingly, more or less curative. This fact would seem to give the Homœopathic practitioner an incomparable advantage over his rival of the old school, for Prof. Mack shows, in this same article, "written especially for the *North American Journal of Homœopathy*," to which we have referred, that *contraria* being incomparable—that is, that there are no degrees of *contraris* or antagonism—its curative sphere must be accordingly limited. In other words, there could be, under the law of *contraria*, but one drug, among all the drugs which a sin-cursed world has produced, that could be exactly antagonistic to a particular case, and, therefore, curative!

We are confident that a multitude of Homœopathic practitioners who vainly pore over their pathogeneses to find the similitude with which to cure their troublesome cases, will feel grateful to Prof. Mack for his discovery that similia is comparable.

D. A. G.

RETROSPECTIVE DIETETICS.

Somatose.—At the last session of the Medical Association, at Elberfeld, in March, 1894, a report was made on a new meat preparation which has been introduced lately under the name of Somatose, as a restorative for persons whose nutrition has been impaired, phthisical persons, convalescents, feeble children, patients suffering from gastric troubles, etc.

Dr. Hildebrandt stated that this preparation consists almost exclusively of albumoses, *i. e.*, albuminous substances, which have already been digested and are coagulated by heat. Under use of Somatose, the process of decomposition in the intestinal tract is slight, because this preparation is quickly taken up in the circulation, and because it does not furnish, to any extent, products of intestinal decomposition. The fact that Somatose is readily assimilated in its own form, and directly replaces the albumen of the body, explains why the body weight increased considerably in some experiments in metabolism made by Hildebrandt.

The new meat preparation, which contains the elements of meat in a digested shape, represents a yellowish powder which readily dissolves in watery liquids. It may be given in milk, soup, cocoa and coffee. Contrary to the meat preparations of the trade, it has the property of being almost tasteless and possesses an exceedingly great nutritive value, as it contains over ninety per cent. of albumoses that is, readily assimilated albumin. The preparation is well borne, even for a long time, without irritation of the stomach, and like other peptones, does not cause nausea or diarrhœa.

Quite a number of practitioners at Elberfeld took part in the discussion, and among others Dr. Lowenstein mentioned the case of a female patient with tuberculosis, who had five or six attacks of vomiting a day on account of a harassing cough and could not retain food of any kind. Since four months she has been taking Somatose with admirable results. The vomiting had ceased entirely. In a second patient the preparation had a very favorable effect on the nutrition and the body-weight.

Dr. Mangel called attention to the excellent plan of combining Somatose and milk, a combination which has already become known under the name of Somatose Mother's Milk. Dr. Kupper has prescribed Somatose in several families with good success. In one family the children have been nourished for a long time with Somatase Mother's Milk, which they bear well and relish. Dr. Ruhle, a specialist for diseases of women, reported also very important results, and said that his patients much preferred Somatose to other meat preparations.

In general the comments on Somatose were very favorable, and the new remedy was considered an important addition to the materia medica, and will be useful in a large number of diseases, and particularly as a reconstructive for feeble persons of impaired nutrition.

Diet in Glycosuria.—Whatever the underlying cause of glycosuria may prove to be, there are certainly two well marked clinical forms of the disease (*Boston Med. and Surg. Journal*). The simpler one, in which the glycosuria is dependent upon and commensurate with the ingestion of saccharine or starch foods, reponds well to a rigid diet, and by careful regimen may be entirely controlled. The graver form, in which the sugar seems to be formed in the body from the albuminoids, is controlled with great difficulty, even by the most rigid diet. Schmitz (*D. Med. Woch.*, 1893, No. 27,) after careful study of several of these cases, found that the excretion of sugar, instead of being diminished by a strictly nitrogenous diet, was increased so soon as the meats and broths were in great excess over the carbohydrates.

Guided by this fact and the great distaste for nitrogenous foods which patients all had, he changed the character of the diet. Meat, eggs and fish were given in small amounts only, and he ordered more varied foods, containing fat, but scantly albuminoids and starches. Under this change the patient's strength, appetite and weight increased, and the sugar excreted diminished in some cases 4 per cent.

The diagnosis between the two forms is made particularly upon the time of sugar excretion. In the simpler form the urine contains sugar chiefly by day and shortly after eating, the urine which is passed early in the morning before breakfast containing little or no sugar. In the grave form, the sugar being formed more independently of the diet, the urine shows less difference between night and morning, and it may usually be considered when the urine contains sugar eight hours after the taking of food, that the case is of the graver form and that the sugar is formed from the albumens.

In this latter class he gives the following diet:

For breakfast: Preferably, cocoa, when pure and unadulterated, on account of its fat, a little milk, and either twenty to thirty grammes of rye, or forty to fifty of white bread. If the cocoa is not liked, the patient may have tea or coffee, and an egg cake made as follows: two or three teaspoonfuls of oatmeal, one egg, and two teaspoonfuls of sour cream are beaten together, salted and baked with a little fat or bacon.

For lunch; a glass of wine and a sandwich of twenty to forty grammes of bread and sardines.

For the noon meal: a broth with a little rice or vermicelli (two pounds of meat should furnish enough broth for three meals); a little fish; potatoes, if not mealy; vegetables very sparingly—as young beans, spinach or cabbage—may be given. Potato salad is often much relished, as are cakes made of raw grated potato-meal, as above described.

For tea: a meal as at noon, but always varied. Dry wine may be allowed.

He reports three cases so treated with a scanty nitrogenous diet, in which the sugar diminished very much, although the daily ingestion of bread was nearly one hundred grammes. Under this regimen also the acetons disapeared from the urine.

Saundby offers the following receipts for diabetic food, which he has found palatable and not expensive:

Almond cakes: one pound of ground almond, six eggs, half a cup of milk. Mix as in other cake, and bake for twenty-five minutes.

Both these cakes keep well for a week.

Blanc-mange made of Iceland moss, and sweetened with saccharine, is absolutely free from injurious constituents and very palatable.

Diet in Ulcers of the Stomach.—Dr. Roux states (*Journal D'Hygiene*) that we should choose foods that are digested in the intestines. Milk, eggs, starches, fruits and green vegetables, farinaceous substances and eggs should constitute the chief diet. The meal of lentils is preferable to potatoes and beans. Among green vegetables, salads are excellent; green peas, turnips and carrots should be mashed before eating. Light puddings are easily digested, especially if they contain eggs.

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THE ORIGIN OF LANGUAGE.

THE origin of language has ever been an interesting topic of discussion and investigation among philologists. Additional light has been within the past few years thrown upon the origin of language by watching the evolution of thought and the transmission of intelligence in the lower and higher forms of animal life, simple sounds forming into distinct words as we reach higher grades of intelligence. Janes, a French naturalist, has recently shown that certain ants make stridulating noises analogous to those of crickets, produced, probably, by the rubbing together of some of the many myose or rough surfaces to be found on their bodies. These noises, too slight to be heard when made by one insect, may be detected by imprisoning a lot of ants between two pieces of glass in a space surrounded by a ring of putty. On holding this to the ear, one may hear, by listening attentively, a gentle murmur like a liquid boiling slightly in a closed vessel, varied now and then by distinct stridulating sounds. These sounds are heard only when the ants are disturbed. As we ascend higher in animal life the sounds may become more varied, with a difference of meaning, according to the modulation of the voice, the meaning being expressed more by the tone and modulation of the voice than by the words themselves. Thus, if you say to a dog, with a sneering tone, "You pretty dog! How I love you!" he may either sneak away or show signs of anger, while if you say, in a pleasant tone, "You ugly brute!" he will show signs of pleasure; and yet the trained dog will, at times, interpret the meaning of words, although not always the spirit, spoken in any tone.

The chimpanzee has undoubtedly the highest order of intellect of any of the monkey tribe, and is undoubtedly the connecting link between man and the so-called brute creation. At least as many as thirty distinct words have been found in his vocabulary of speech, two of them being identical in sound and one in meaning to the native African language. Two specimens of this race, for a time in the menagerie of the Central Park, showed wonderful power of intelligence, and even of a certain kind of intelligent speech. Professor Garner, who has devoted much time to the study of the Simian language in the home of the race in Africa, says he has learned to talk with the chimpanzees and to be understood by them, in a limited way, upon a few subjects. He finds the language not only suggests the desire, but in a measure qualifies it. Thus the call of the chimpanzee conveys the idea of "Come here," "Go away," "Beware." The sound for food is not merely a remote hint of something desired, but specifies the thing desired, as fruit, flesh, etc.

The origin of language, we have abundant reason to believe, started with the lower forms of animal intelligence, keeping pace with successive evolutions of life, until, in the Simian race, it reaches the dignity of a distinct language, expressing a positive meaning in words which, to some extent, form a part of human speech. Untold ages must have elapsed from these beginnings of words to express ideas to the language of the Basques, said by Pliny to be the oldest race in the world, and their language the primitive tongue of the human race. According to Pliny, the Basques inhabited the continent island of Atlantis before it sank beneath the ocean with the upheaval of the Alps and Pyrenees, overflowed upon the continent of Europe, when, in the process of time, they were conquered by the Aryans, and driven from point to point, until now the only remains of this primitive race are found to the number of about 300,000 in the mountains of Spain, and the few Algonquin and Maya Indians left in this country of an almost extinct race. The Aryan race inhabiting Northern India and the mountainous district of Central Asia broke up in the very beginning of history into three great streams—one finding a resting place in Egypt and becoming the father of the Egyptian race, another overflowing into Europe and developing in successive ages the great empires of

Greece and Rome and the nations now ruling over the different States of the continent.

The Basque language and the Sanscrit, which came with the Aryans, and became the foundation of all the European languages, were marvels of condensed meaning and vigorous expression, many of their words having been absorbed, without change of spelling or meaning, into all the modern languages of the world. Notwithstanding the vocabulary of each language has increased with the advancing ideas and wants of the times—that of the English tongue, as given in the dictionary of Funk & Wagnalls, numbering 300,000 words—no more expressive words can be found for the meaning they were designed to convey, than some of the Basque words now in use in that relic of the primitive race living in the mountains of Spain, and in the purity and strength of the Sanscrit still spoken by that race in the north of India, from which all the nations of Europe and America sprung. In the evolution of the human race, in its speech and conquests of the forces of nature, untold ages must have passed, and untold ages are yet to come, before all the power of nature will be subject to the will of man, and man, in power of intellect, in clearness of vision, and in freedom from every discordant note, become as the Sons of God.

AMERICAN MEDICAL ASSOCIATION.

THAT the medical world moves, at least that portion of it which forms the American Medical Association, is apparent from the fact that its committee on the revision of its code of ethics has closed its herculean labors with the resolution that, "No intelligent practitioner who has a license to practice from some medical board of known and acknowledged authority, and who is in good moral and professional standing in the place in which he resides, should be refused consultation when it is requested by the patient." It would have been better for the Association if its revision of the code had commenced and ended just here, but in defining the duties of the profession as it regards patents and secret remedies, it gives the Philadelphia County Medical Society an opportunity of rapping the journal of the association sharply over the knuckles in the following resolutions:

"WHEREAS, The Code of Ethics of the American Medical Association declares it derogatory to professional character, for a physician to dispense or in any way promote the use of secret nostrums, and the American Medical Association, by a resolution unanimously adopted at its meeting in 1892, forbid the advertising of such nostrums in its journal, and

WHEREAS, The journal of the Association has continued to advertise such nostrums, and in defense of its course in this particular has published an anonymous personal attack on a member of the Medical Association and of this Society,

Resolved, That the Philadelphia County Medical Society respectfully demand that the trustees of the journal shall, in their public official acts, respect the spirit and letter of the Code of Ethics, and that the columns of the journal shall not be used for the anonymous personal abuse of its members in good standing."

It could hardly be expected that the American Medical Association could take more than one step in advance in a single decade. We congratulate them, however, that the idea has at last taken substantial root, that their iron bound Code is so weakened by rust that it has no longer any strength and had better be conveyed to the receptacle of old iron. Possibly when the Association gets together in San Francisco, some other bright ideas may enter their heads, and they may consider it wise to let medical journals and medical men conduct their business as they think best.

SENSITIVENESS OF PLANTS.

WE find in *Nature* of the date of April 19th, an abstract of an exceedingly interesting address, delivered by Prof. Pfeffer before the Association of German Naturalists and Physicians, on the irritability of plants, showing that irritability is not, as is sometimes supposed, a rare phenomena of plant life, but is a property of all plants. He says the sensitiveness of mimosa, the curling of a tendril, when touched, or the curvature of a plant in directions determined by light and gravitation are merely particular instances, and there are thousands of less obvious ones—for instance, the extraordinary directive influence of malic acid upon ferns or of potash salts on bacteria. If man could have viewed the plant world from childhood through a microscope, he would have never inherited the belief that irritability is chiefly the property of the animal organisms. He would have had constantly before him the innumerable host of the free swimming plants and other low organisms; and the hurrying bacterium rushing and turning on its food would have been as familiar as the beast of prey springing on its victim.

The one thing common to all these reactions

is that each is a phenomena of release—a trigger action—that is, the stimulus acts only to release energy stored in the organism, just as a touch of the finger on the trigger of a gun may explode the powder. To produce a stimulus reaction, a change in external or internal condition is necessary; thus the sensitive plant does not react to steady pressure, but to a change in pressure. In the same way it is rather the change from cold to heat than the heat itself, which causes a plant to stop growing. Different stimuli seem not to produce the same effect in a given cell; that is, a plant cell does not react like the human eye, for instance, in which the most varied stimuli produce only one effect—that of light. Thus the development of distinct sense organs, such as are found in the higher animals, is not characteristic of plants any more than it is of lower animals. Plants are equal to animals in variety of sensibilities,and have the advantage of delicacy of perception. Bacteria are attracted by a billionth of a milligram of meat extract—a quantity we cannot weigh, and of which we have no conception.

CRAIG COLONY FOR EPILEPTICS.

THIS colony is named after Mr. Oscar Craig, of Rochester, in commemoration of his services in behalf of epileptics, and other unfortunates, and is modeled after the German colony at Bilefield, the practical and beneficial workings of which haye been so markedly successful. The property will include that heretofore owned by the Shakers near Mt. Morris in Livingston County, and includes eighteen hundred acres of land in one of the finest locations of the Genesee Valley. The Shakers have erected upon the property two groups of buildings, valued at $75,000, suited to all the purposes of colony or village life, which, with slight alterations, will accommodate at least three hundred patients. The supply of water is abundant, the property being divided into two parts by the Cashauqua Creek, which flows through the land in a deep gorge, with a fall of one hundred feet, affording a perfect natural barrier for the separation of the sexes. The soil is well adapted for all manner of agriculture, horticulture, the production of berries, fruits and garden produce. There are fine orchards, including more than two thousand apple, cherry, peach and pear trees. There is also a large variety of grape vines and currant and raspberry bushes. Experience has everywhere proved that one of the greatest boons to epileptics is plenty of healthful outdoor employment. Indigent epileptics are to be received and supported by the State, but the colony is expected, when fully established, to be nearly self-supporting. Private patients may be received when there is room for them, the expense of their support being borne by parents and guardians.

THE *Bulletin* of the German Imperial Health Department gives to Berlin the honor of being the healthest city in the world, the death rate being only 16.3 per 1,000. When it is remembered that Berlin is situated on a plain with a river running through the center, whose current is so slight as to be almost imperceptible, it shows the almost perfect system which enables them to gather up and disinfect the refuse, and appropriate it to purposes of fertilization in the gardens of the suburbs. The cities which stand next in point of health are Stockholm, with a death rate of 16.9, and Christiana, which rates at 16.19. London, with its millions of population, has a death rate of 20, while New York, much more favorably situated than either of the cities mentioned, a death rate of 24 per 1,000. What has been accomplished in Berlin could easily under proper management be accomplished in New York, with far less expense than at present.

THE *London Hospital* says, in discussing the question of longevity, there are two sorts of pressure which tend to shorten life—blood pressure within and atmospheric pressure without. The latter is a specially important factor in a humid climate. In advancing age the circulation of the blood and lymph tends to become slow, and the enfeebled heart finds its embarrassments increased by this condition. Especially do the more vascular organs, such as the lungs, the liver and the kidneys, put skids on the wheels of the blood circulation. Plainly, then, an important condition of cardiac easement, and therefore of life prolongation, is the maintenance of an uncongested state of lung, liver and kidney. Thus are internal pressures relieved, and thus is cardiac energy conserved. Of almost equal importance, at any rate in Great Britain, is the question of atmospheric pressure and moisture to aged persons. Situations which are at once low-lying and damp give, of course, a maximum of atmospheric pressure. Such pressure weighs down at a single stroke body, mind and life. The difference to aged persons between living at the sea level and living 500 feet above it, between living in a moist atmosphere and living in a dry one, is sometimes quite incalculable. Not seldom life may be

lengthened by five or even ten years by living in an atmosphere which is both light and dry. These physiological considerations are commended to the aged and to the physicians of the aged.

THE seed sown by Dr. Terry in an able article some years ago on "Infection and the Communion Cup" has attracted the attention not only of physicians, but of the general public, and has led to many suggestions to do away with the evil. A correspondent of the *Medical Record* suggests that the bread or wafer be moistened with the wine, and so administered, or that a small quantity of the wine be inclosed in soft gelatine capsules, fashioned like grapes, and handed to the communicant from the chalice. The habit of kissing, so common in this country, is certainly one which never came from the Orientals, by whom it is in a great measure avoided, as a matter of physical purity and cleanliness. The high caste Hindoo seldom kisses or even shakes hands. The Japanese mother never kisses her child on the lips, owing to the fact that the kiss may carry to her offspring some form of disease lurking in her own system. Certainly good will, and even affection can be better shown, than by the kiss so common among ladies of even casual acquaintance, or which is impressed on the lips of the babe by every woman who comes in contact with it.

VOMITING OF PREGNANCY.—Dr. Berry says, in the *Memphis Medical Monthly*, where the patient is of a nervous temperament, cannot retain even a sip of tea or water, a formula composed of one ounce of fluid extract of valerian, sixteen minims of Fowler's solution of arsenic and one drachm of sodii bicarb. has never failed in his hands of producing prompt relief, when given in teaspoonful doses every two or three hours.

CHEMISTRY AND MEDICINE.—In the course of a very interesting address delivered to the recent Medical Congress at Rome, by Prof. B. J. Stokvis, of the University of Amsterdam, and reported in *The Lancet*, London, April 15th, says the *Literary Digest*, he notes that the first light that we have received on the hitherto mysterious relations between chemical and vital phenomena has come from the chemical and not from the physiological side. Some of these mysteries are, for instance, the action of infinitesimal quantities of certain substances which pass through the organism without causing in it the least change, but which provoke such disordered chemical actions as to occasion death; the apparent ability of different parts of the organism to distinguish one substance from another; the fact that insoluble substances like arsenic and hashish manifest curative and poisonous action. The labors of Van t'Hoff and his co-workers have made it clear that the neutral solution of a salt in water, for instance, is not the inert substance it seems to be, but that it has the same kinetic power as if the molecules of the dissolved substance were present in a gaseous state. This conception is of the highest value in biology. It follows from it that the chemical actions that accompany vital phenomena become stimulated, troubled, or altogether upset when we introduce into the system a solution of some complicated substance, whose molecular forces become added to those of the cellular system. In fact, phenomena similar to those we have been accustomed to regard as vital take place sometimes in chemical solutions, as when chloride of potassium, added to chlorate of potassium, is able by its mere presence, without undergoing chemical change, to determine the formation of ozone, when the mixture is heated, though this chloride of potassium possesses the power of destroying the ozone when formed. These phenomena are precisely those called excitement and paralysis in the living organism.

THE GERM OF SMALL-POX.—The *London Lancet* says: Prof. Guamuri, of the University of Pisa, still holds the views first published by him in 1829, that the process of pustulation, both of cow-pox and small-pox, is due to a parasite in the epithelial cells. This organism consists of a rounded body with a clear outline, and is capable of amœbic movements, which can be seen on the examination of lymph taken from the initial vesicle. Prof. Guamuri has succeeded in reproducing the parasite in the cornea of rabbits by inoculation, and has verified the fact that no other source of irritation is capable of producing anything of the appearance of the same parasite in the cornea. He believes that it is a zooparasite belonging to the class of chizopods, and that it is the cause of both cow-pox and small-pox.

THE CYANIDES.—The recent killing of the elephant, Tip, in the Central Park, has brought to the notice of the public, what of course has been familiar to the profession, the rapid and deadly action of the cyanides as poisons. The reason why they have not been used more freely in murder is the peculiar taste and the perceptible odor they leave behind them. And yet, this ter-

rible poison has its antidote, as has recently been discovered by Dr. Julius Von Kassa, of Budapest, in the same drug which has recently proved an antidote to opium, the permanganate of potash, the chemical action which changes the character of the poison being undoubtedly similar in both cases.

A NUT FOR THE ANTI-VACCINATIONISTS.—Of 1201 persons acting as nurses and physicians to the hospital ships of Great Britain where small-pox patients were confined, only six took the disease during the years from 1884 to 1892, and all recovered. All had been vaccinated.

FOOD IN THE FUTURE.—A writer in the *Contemporary Review*, discussing the probable future achievement of invention along certain main lines, asks the question, "Why should not vegetable foods which at present are only adapted to animals, like the cow, the sheep and the horse, be reducible to a condition suitable to the human digestion and the human palate?" The chemical constituents of these vegetable foods, such as grass, are similar to those which we now consume in various existing foods, and they are adapted to the requirements of the human frame. It is only a question of digestion. It can hardly be, but that with the continued progress of organic chemistry and medical science, some means will sooner or later be discovered of solving this problem. If the process can be brought to a cheap and working shape, the sources of our food supply will be greatly enlarged, at a time, perhaps, when increasing population and a growing pressure in the struggle for existence will make such a result most opportune and welcome to the world.

THE new law increases the fine for a failure to make prompt returns of births, marriages and deaths, from ten to one hundred dollars, and the Board of Health is taking prompt action in the matter. The failure to make these returns, so important in the record of vital statistics, is in almost every case a matter of carelessness, which nothing but a large fine will effectually correct.

THE formal opening of the new and magnificent building of the New York Post-Graduate School and Hospital at Second Avenue and Twentieth Street, was held on May 9th, with great éclat. In the evening there were formal opening exercises in the reading-room of the building on the first floor. The Rev. Dr. Marvin R. Vincent offered prayer. Dr. Clarence C. Rice read a report of the hospital work, and addresses were made by Dr. D. B. St. John Roosa, the President of the institution; the Rev. Dr. William R. Huntington, who spoke on the babies' wards, and St. Clair McKelway, who said, in part:

"The doctor's calling is the grandest in the world. The theologian has claimed primacy, and the lawyer has claimed equality for his calling, but the greatest is the doctor's. The gospel of help outclasses the gospel of dogma. Medicine gives or makes the sound body, which is the necessary temple to the sound mind, and then itself ministers to the mind diseased, and does what the dramatist said could not be done, 'plucks from the memory its rooted sorrows.' The best title of Him whom we worship, whether as Jehovah, Jove or Lord, was, and is, that of the 'Great Physician.' Chief of His laws are His laws of health, which he has written in nature and in man, establishing complete correspondence between them. So long as fallible humanity wanders amid the monuments of an incomplete civilization which it betters century by century, so long will be needed the highest examples of medical skill and the grandest evidences of medical instruction. Such examples and such evidences are institutions like these. May God foster and multiply them, everywhere and here!"

The school is to be congratulated upon the good work it is doing, and the bright prospects which are in store for it.

BIBLIOGRAPHICAL.

"THE TREATMENT OF TYPHOID FEVER," by D. T. Stewart, M.D. Physicians' Leisure Library Series. Price, 25 cents.

SAUNDERS' QUESTION COMPENDS. "Essentials of Nervous Diseases and Insanity." By John C. Shaw, M.D. Second edition.

COMMENCING with the July issue, the *Archives of Pediatics* will be edited by Dillon Brown, M.D., Adjunct Professor of Pedriatics at the New York Polyclinic.

"THE ESSENTIALS OF PHARMACY," by Professor L. E. Sayre, is the last issue of Saunders' Question Compends, and like all the rest of this series, gives in the form of questions and answers a wide range of pharmaceutical facts, carefully condensed, and presented in a manner easily understood.

THE *Homœpathic Journal of Ophthalmology, Otology and Laryngology*, edited by Dr. Chas. Deady and associates, an excellent journal of its class, and ably edited, we are glad to see, has dropped its distinctive title, and now appears as the *Journal of Ophthalmology, Otology and Laryngology*. Congratulations.

"ESSENTIALS OF ANATOMY." Including the Anatomy of the Viscera. Arranged in the form of questions and answers, prepared especially for students of medicine. By Charles B. Nancrede, M.D., Professor of Surgery, etc.,

in the University of Michigan. Fifth edition, with an appendix on the Osteology of the Human Body. The whole based on the last edition of "Gray's Anatomy." 180 fine illustrations. Philadelphia: W. B. Saunders, 1894; pp. 388; 12mo.

"INTERNATIONAL CLINICS." A Quarterly of Clinical Lectures on Medicine, Neurology, Pediatrics, Surgery, Genito-Urinary Surgery, Gynæcology, Obstetrics, Ophthalmology, Laryngology, Otology and Dermatology. By professors and lecturers in the leading medical colleges of the United States, France, Great Britain and Canada. Edited by Judson Daland, M.D., Philadelphia, Instructor in Clinical Medicine, and Lecturer on Physical Diagnosis in the University of Pennsylvania, etc.; J. Mitchell Bruce, M.D., F. R. C. P., London, Eng., Physician and Lecturer on Therapeutics at the Charing Cross Hospital; David W. Finlay, M.D., F. R. C. P., Aberdeen, Scotland, professor of Practice of Medicine in the University of Aberdeen, etc. Vol. I. Fourth series, 1894; pp. 358; octavo. Philadelphia: J. B. Lippincott Company, 1894.

SYPHILIS IN THE INNOCENT. Clinically and historically considered, with a plan for the legal control of the disease. By L. Duncan Buckley, A.M., M.D. New York: Bailey & Fairchild, 29 Park Row.

This essay, the work of one of the most careful observers and scientific physicians in this country, received the Alvarenga Prize in 1891, awarded by the College of Physicians of Philadelphia for the best memoir on any medical subject. The work of preparation must have been herculean, as the literature of the medical world upon this subject has been consulted in more than a dozen languages. Clinical records, more or less complete, are given of one hundred and sixteen original cases of extra genital chancre. A classification of the modes of infection is given: 1st. In connection with household and industrial life; 2d. In the case of children; 3d. In professional pursuits. Whatever Dr. Buckley does is well done, and in this essay he has condensed and grouped under distinct heads a mass of information, perfect, reliable, and of the utmost importance to the physician.

COMPENDIUM DER ARZNEIVERORDNUNGSLEHRE fuer Studirende und Aerzte. Von Prof. Dr. Rudolf Kobert, Director des Pharmakologischen Institutes zu Dorpat. 2d edition. With 121 cuts in the text. 364 pp. Ferdinand Enke, Stuttgart, Germany, Publisher, 1893.

Prof. Kobert is a well and long known worker in this field, for many important contributions have been given to the literature of materia medica from his pen. This work is intended as a compendium, a guide, for the student and physician, through the mysteries of successful prescribing. The basis of the work is formed by the lectures which the writer had delivered both at Halle and Dorpat, Russia. The essential changes which had taken place in prescription writing, and the various new drugs which had appeared since the first edition of the work, in 1888, rendered a revision of the work decidedly necessary. New cuts have been added, supplementary notes and chapters have been rendered necessary through the many changes which time has wrought. It is divided into two great sections: one on the general principles of prescription writing, and the other devoted to the various forms in which the special drugs are employed. It is not only a compendium for the student who is desirous of obtaining a general view of the subject, but it may be said to be a complete work on the art of prescribing, which the busy practitioner, who has long since passed his examinations, may peruse with profit. Like everything written by Prof. Kobert, it is written in an eminently scientific spirit, yet at the same time practical and concise. The publisher's part is well done, though it is bound in paper, as are most German works.

THE PRACTICE OF MEDICINE. By Edwin M. Hale, M.D. author of The New Remedies; Diseases of the Heart; Diseases of Women; The Heart, and How to Take Care of It. Emeritus Professor of the Theory and Practice of Medicine in the Chicago Homœopathic Medical College; Member of the American Institute of Homœopathy; The Illinois Association of Homœopathic Physicians, etc., etc., etc., pp. 1033, 8vo. Chicago: Gross & Delbridge, 1894.

The author says that "the aim of this book is to present to the physician the most practical way of treating disease by medicinal and hygienic methods," and for that purpose he has drawn upon the experience and observation of practitioners of all schools in medicine, and the therapeutical part of the work is not confined to the Hahnemannian rule of similars. There is no doubt the work has been honestly and conscientiously done, from a liberal standpoint. We regret to note some examples of very careless proofreading, which mars the text.

In the treatment of diphtheria, the subject of diet might have been treated at greater length to advantage and with more positiveness. We are pleased to note that the author's experience with papoid locally has agreed with our own. On the whole, the article is suggestive, and will be helpful. So we might say of all the subjects treated; the suggestions are excellent, and evidently based upon the experience of the author.

We can confidently say to our friends who are not associated with the Homœopathic school, that they will find in this book much that may be utilized by them in practice; yes, a vast storehouse of practical suggestions, based upon experience and common sense, with little that is dogmatic.

We hope the work may find its way into the hands of a vast number who are looking for newer methods in therapeutics.

LEHRBUCH DERFRAUENKRANKHEITEN von Dr. Hermann Fehling, ord. Professor der Ceburtshuelfe und Cynaekologie, Director der Universitaetsfrauenklinik zu Basel. Mit den in den Text 240 gedruckten Abbildungen. 540 pp. Ferdinand Enke, Stuttgart, Germany, Publisher, 1893.

This important work on gynæcology, and, doubtless, the most important which the year 1893 has brought forth, forms a volume of the solid and valuable Physicians' Library, issued by the well-known publishing house of Ferdinand Enke, of Stuttgart, Germany. The writer has long been known, both in the field of gynæcology and obstetrics, and is fully able, with his extensive experience and his profound knowledge of this subject, of offering a work which not only the student, but also the practising physician and gynæcologist, may read and consult with advantage and profit, however varying the requirements may be. The language is clear and concise, the latest additions to our knowledge of this branch are critically presented and considered, together with the views of the writer, which makes it a valuable guide for the student and practitioner. It is written in a highly scientific spirit; it is both complete and reliable, and would form a valuable addition to the library of any German-reading practitioner or gynæcologist. In it one may find instruction on any point, whether it be a special operation, method of treatment, or the state of any related scientific question. The numerous well executed cuts greatly enhance the value of the work, and serve to render the text clearer and more interesting. The general treatment, a chapter which is so often neglected in German works on gynæcology, is given full and complete consideration, and the results of operative activity, which holds so high a place in German medicine, are all critically treated and presented. The most important sources of the literature are given, especially those which are accessible to the general practitioner. It is an excellent work, and one which any one reading German might possess with profit.

SOCIETY REPORTS.

THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY, STATED MEETING, FEBRUARY 16, 1894.

(Stenographically Reported by C. C. Mapes for this Journal.)

THE PRESIDENT, DR. T. L. McDERMOTT, IN THE CHAIR.

COMPOUND DISLOCATION OF ALL THE METACARPAL BONES.

Dr. W. O. Roberts: This gentleman is a switchman, and in following his vocation his foot became caught in what they call the "frog," and he fell in front of a moving train. He drew himself as far from the train as he could, but thinks the car passed over his arm, and he does not know how his hand was hurt. When I saw him there was a cut clear across the hand, as you will see, and a dislocation of all the metacarpal phlangeal articulations. The wound has healed perfectly, and there is considerable motion, but he is not able to straighten the fingers entirely. I did not use any sutures. I simply report the case, as I believe it is a character of injury that is extremely rare. It is the second case I have seen, the first being early last fall. In the case I have reported I cannot conceive just how the injury occurred. The accident was in January, 1894.

OMENTAL HERNIA—OPERATION.

Dr. A. M. Vance: The specimen I present is the remains of an immense ventral hernia, taken from a large woman æt. forty-three years, whom I first saw about thirteen years ago. The contents of the hernia proved to be purely omentum, but had been for some time causing a great deal of pain upon change of position in bed, causing her rest to be broken, and when called to see her again a few days ago, I advised operation. Here you will see the sac, the opening being about the size of a half dollar. I believe that the trouble had been aggravated by an improperly fitting truss, which she had been wearing for a long time. This is the third case of large umbilical hernia that I have operated upon. They have all been very forlorn cases as far as the operation was concerned, as I was not allowed to operate except as a *dernier ressort*. Dr. Roberts will remember one case he saw with me, a patient of Dr. Lieber's, where the woman made an excellent recovery after operation. About three times as much omentum was removed as in the case I have just reported. This was also a case where an improper truss had been worn. I made an elliptical incision immediately over the protrusion; coming in contact with the omentum, it was tied off in perhaps a dozen different sections, and dropped back into the cavity. The first row of stitches were inserted through the remains of the hernial sac, going wide so as to get into good tissue, the sutures being tightly drawn, and from that built up with a series of stitches the whole abdominal wall. In this case the wall was fully four inches thick. Silk worm gut sutures were introduced prior to the introduction of the barred sutures, reinforcing these and completely closing the integument. The woman has done well up to the present time, thirty-six hours. Her temperature has not been above normal, pulse not over eighty. There was no hemorrhage.*

DISCUSSION.

Dr. A. M. Cartledge: This case illustrates the fact that it was but very few years ago when surgeons looked with a great deal of dread upon ventral hernias, many of them in perfectly operable cases advised against the procedure. These cases were looked upon as being attended with some unusual danger, believing possibly that the contents of the hernial sac would contain a great deal of disorganized peritoneal tissue and omentum, which would make operative procedure dangerous. But later results show that such cases may be operated upon with comparative safety. Just such cases as this for instance, where the abdominal walls are enormously thick and the sac contains a large quantity of omentum; the majority of them are now regarded as entirely operable, and much safer than a great many other classes of abdominal surgery. I believe that all such cases should be operated upon, and if done early there is little danger.

Dr. W. O. Roberts: I agree with Dr. Cartledge that these cases may be operated upon with as much safety as any other class of abdominal surgery. It is one of the hernias, however, in which the ultimate result is often not nearly as good as it is in the other varieties. There is an enormous amount of omentum, and it is necessary to be exceedingly careful in the operation, or injury may be done the intestine. One of the members of this society, some time ago operated upon an old hernia, in which fully as much omentum presented as in the case reported by Dr. Vance, and a portion of the intestine was so thoroughly matted in the omentum that it was about to be included in the ligature in two places. I have done quite a number of these operations for umbilical hernia, and while I have been fortunate in not losing a case, I have not been so fortunate as not to have a recurrence of the hernia. I operated upon one woman three different times, patient weighing over 200 pounds; in the first two operations the result was perfect, but after a year there was a recurrence. The patient died about a year after the third operation, of pneumonia. There was no recurrence of the hernia. The technique of Dr. Vance's operation was rather different from that usually done. That is, he connected the lips of the peritoneal wound between the fibrous structures of the abdominal wall. In all the operations of this character that I have done I have stitched the peritoneal wound, then stitched the remaining structures over it, using the same means afterward in closing the external wound—that is, by layers of sutures, the last being through the skin. The only objection to the operation as done by Dr. Vance is that he used catgut, which is so hard to get perfectly aseptic. If any trouble should follow the operation, I would certainly believe it due to the suture material.

Dr. A. M. Vance: I believe that so long as the contents remain omental there is very little danger in these hernias. I think, though, that the constant inconvenience which occurs, is justification for the operation. The great danger is as Dr. Roberts has stated; there is liable to be an interocele, and it is possible that strangulation may occur. In the case we saw with Dr. Lieber this condition was present. I think fully ten inches of the ileum was strangulated. It is now eighteen months since the operation was performed, and while I have not seen the patient, Dr. Lieber reports that she is perfectly well. In herniæ of this class, where there is a large tumor which is irreducible, and is causing any inconvenience, or where the hernia is reducible and cannot be retained by a properly adjusted truss, operation should be performed. The only truss that can be used in herniæ of this character, where the patients are so immensely fat, is the complete abdominal supporter, which can be so graduated as to protect the hernial opening. I do not think any spring truss can be used with success in these cases; in fact, the ordinary spring truss does no good upon any umbilical hernia. Further, where the patient is as fat as this woman was, it is almost impossible to apply an abdominal supporter with success. I agree with Drs. Cartledge and Roberts that where there is no strangulation, there is very little danger in the operation. The only danger would be connected with the omental stump after it is returned. This subject has recently been thoroughly discussed by Dr. Bull. His idea is to make as many ligatures as possible, so as not to include much omentum in any one ligature.

*This patient died at the end of three days, the cause of death being very obscure, no septic element being apparent. She became maniacal some hours before death.—A. M. V.

REMOVAL OF BULBOUS EXTREMITY OF SCIATIC NERVE AFTER AMPUTATION OF THIGH.

Dr. W. L. Rodman: This specimen was removed to-day at the clinic at the City Hospital from the stump of a young man, whose thigh was amputated at about the lower third four months ago, by Dr. Briggs, of Nashville, Tenn. I never saw a more beautiful stump, showing that the amputation had been perfectly done. The cicatrix was not painful, but upon pressure two exquisitely tender points were discovered. I made a central incision and came immediately down upon two small tumors, the larger one being the bulbous extremity of the great sciatic nerve, the smaller evidently being a branch of the sciatic; the cicatrix pressing upon these small tumors was the cause of the tenderness and discomfort. By carefully dissecting and pulling the nerves down, I removed about three and one-half inches, which I believe will be followed by complete relief.

DISCUSSION.

Dr. A. M. Cartledge: Recently I have encountered two painful stumps, but neither case was due to the inclusion of a nerve. The cause in one case was marked necrosis of the fibula, the other adherent cicatrix, both conditions not permitting the use of an artificial limb. When the use of artificial limbs was attempted, the stumps would become so sensitive and cracked, they had to be discontinued. A second amputation was made in both cases for this purpose, followed by complete relief, and enabling the patients to wear artificial limbs with perfect comfort.

Dr. A. M. Vance: I have operated several times for bulbous nerves. In one case the thigh had been amputated several years previously, and the result was perfect, with the exception of a tender spot. Upon examination I discovered a small tumor in the stump. An incision was made, and it was found to be the bulbous extremity of the sciatic nerve, which was as large as a bantam egg, being the largest that I ever heard of. Complete relief followed its removal. Another case I remember occurred in the person of a doctor who had his little finger amputated, and in this case I think I removed as many as a half dozen little nerve tumors. I have often had to reamputate limbs where not enough bone had been removed in the primary operation, and it had become adherent to the cicatrix, which prevented the use of artificial limbs.

REMOVAL OF THE OSSICLES FOR RELIEF OF CHRONIC SUPPURATIVE INFLAMMATION OF THE MIDDLE EAR.

Dr. J. M. Ray: These specimens, as you will observe, are the ear ossicles, removed for the relief of chronic suppurative inflammation of the middle ear. There seems now to be a rapidly growing tendency toward surgical methods in the treatment of chronic ear diseases, both the chronic suppurative and non-suppurative cases. The operation of removing the ossicles has attracted a great deal of attention within the last few years. I have not attempted the operation in a case in which the drum membrane was intact—chronic non-suppurative affections—for the reason that operations in this condition have not been always successful, and I have not been able to offer patients the relief that I felt they were entitled to before being subjected to operation. But in chronic suppurative inflammation of the middle ear, I think the operation justifiable. I see no reason why we should not strive to get good drainage in suppurative disease of the ear, as we do in suppuration elsewhere, by operative procedure. The major portion of the ossicles are situated in the attic of the tympanum, and in suppurative inflammation the accumulation often becomes blocked in this neighborhood, and it is impossible to secure drainage or to stop the suppuration by any local medication, and I see no reason why we should not resort to surgical interference, with as much hope for relief, as we would in chronic suppurative inflammatory conditions in other parts of the body. These two specimens were removed from patients suffering from long standing purulent discharge from the ear. The patients were subject to recurrent attacks of inflammation, and had gone through the regular routine of treatment, by cleansing, the introduction of antiseptic solutions, etc., without relief. I have had in all five cases which have been operated upon in this manner, and while I cannot report any marked improvement in the hearing, there has been a decided lessening in the flow of pus. One was the most disagreeable case of chronic suppuration of the middle ear that I ever saw. There was so much tenderness that syringing could not be employed, and nothing gave relief except hot applications. Under the influence of chloroform, with instruments devised for the purpose, I excised the remains of the drum membrane, and by manipulation I grasped the ossicles with forceps and removed them. Since that time a false drum membrane has formed over the fundus of the ear, and the woman has had no trouble. In another there was a small spot of necrosis outside the drum membrane in the roof of the canal, and a membrane has formed covering the whole of the tympanic cavity, yet a little drop of pus occasionally oozes from this point outside the drum membrane. This patient suffered with severe attacks of earache. Operation was performed last summer, and she is pleased with the result. In the other specimens, one a malleus and one an incus, by examination small spots of necrosis will be found on them. The case was operated upon five weeks ago, and while there is not complete cessation of the discharge, it is much less, and no pain has been experienced. Another case was operated upon at the clinic, and lost track of. In the two other cases there has not been complete cessation of the discharge, and there may possibly be some disease of the tympanic wall. In one case I failed to get out anything except a small piece of the malleus; it is probable that the suppuration had dislodged the incus, or it became shoved up into the attic by the manipulation, and I failed to find it with forceps. Schwartz and Sexton have given considerable attention to this operation, and the latter says that it can be performed under chloroform without much trouble. I do not think it at all dangerous, and in long standing pus discharges from the ear it certainly is indicated, giving free drainage to the tympanic cavity, especially the attic. By this operation I believe we can cure a great many cases which cannot be relieved by the instillation of drugs into the ear. Hemorrhage following the operation is usually quite free, but is controlled by hot water injections; after it is completed I fill the canal with iodoform powder.

DISCUSSION.

Dr. T. H. Stucky: I have been very much interested in the report of Dr. Ray; all of us who do work in this line have probably noticed the literature on the subject during the past three years. Personally I have not operated in this condition; my reason for not doing so is that in the three cases referred to Dr. Sexton, and upon whom he operated in the last three years, the discharge has not ceased entirely in any of them. There has been no decided improvement in the hearing, and I fail to see how the patients have been benefitted. Where a patient is suffering from recurrent attacks of earache, as in the case reported by Dr. Ray, and the unusual sensitiveness as stated by him, I believe the operation justifiable. Upon theoretical grounds, and from the report of cases, Dr. Sexton claims in many instances very decided results, not only complete cessation of the discharge, but in many instances a very marked improvement in hearing. One young man from this city was sent to Dr. Sexton, and was operated upon a year ago; his general health is improved very materially, and the discharge has changed, yet it continues. It is free from odor to a very large extent, and has improved in this way. I see no reason, though, why in suppurative conditions operation may not be the means of very great relief of vertigo and offensive discharge, but I question whether it is of benefit in the catarrhal conditions.

Dr. S. G. Dabney: There are two operations that are done now-a-days for the cure of chronic discharge from the

middle ear. In children these discharges are often cured by the removal of adenoid growths from the roof of the mouth. In suppurative inflammation of the upper part of the tympanum, I believe the operation mentioned by Dr. Ray is indicated to secure free drainage. In cases where no relief follows operation there is very likely necrosis of some of the bones of the wall of the tympanum or auditory canal, but a fair proportion of the cases, at least, seem to be relieved by operation, if we can judge from reports. There is unfortunately another side to the question, however, several cases having been reported by different operators where complete loss of hearing followed the operation. There has been, so far as I know, no fatal result, but one of the Philadelphia surgeons has had one very serious inflammation of the mastoid following the operation. That is the only case that I have seen reported where there were any untoward symptoms. The operation, I think, is not a very difficult one, but I have had no opportunity of performing on the live subject. I have operated once on the cadaver, recently. I have advised this procedure in several cases, but it has been refused. I was struck by what Dr. Ray said about pushing the incus up into the attic. In doing the operation upon the cadaver some time since, in order to keep familiar with it, I only succeeded in removing the malleus and part of the incus; the balance was probably dislodged and forced into the antrum, as he states. A great deal is claimed for the operation in non-suppurative cases by Burnett, of Philadelphia, Sexton, of New York, and others, but so far as my own observation goes, I seriously question whether it is advisable in such cases. In chronic suppurative inflammation of the attic, where discharge has nearly or quite ceased, the symptom of vertigo demands attention sometimes, because we find very often that it cannot be accounted for in any other way. I have seen two or three such cases in adults where there was severe vertigo, and no other cause could possibly be assigned for it. In these cases, removal of the ossicles would probably cure the vertigo.

Dr. J. M. Ray: I have, as yet, had no experience with cases in which the drum membrane was still intact in removal of the ossicles. I have tried it on the cadaver several times, and cannot convince myself that I can do it in the way writers on the subject have indicated—simply to make a flap out of the drum, and go in and take out the stapes. Recently, in doing the operation upon a cadaver, I tried to make a flap of the drum and remove the stapes, but was only partially successful, and as the operation has to be done mostly by feeling, I have been unwilling to attempt it on the live subject. Drs. Blake and Jack, of Boston, have done a number of these operations, and their results are apparently very flattering, but I have not been able to offer my patients positive relief by the operation, therefore I operate only upon suppurative cases.

A CONTRIBUTION TO THE PATHOLOGY OF APPENDICITIS.

Dr. A. M. Cartledge: The members of this society, and in fact the profession at large, should be interested at the present time in an improved classification of appendicitis. Unfortunately, everyone who has attempted to classify this disease has started as a rule, upon a mixed basis. First, we thought the classification should be based upon the anatomical conditions and situations, next upon the clinical phenomena presented, and finally we commenced basing a classification upon the pathology of the disease, which is the only correct one. I have tried time and again to formulate something that would be regarded as satisfactory, at least to myself, but it is a very difficult subject. We find most authorities on the subject still speaking of the disease as catarrhal, ulcerative, perforative, etc. There is only one way that this subject can be properly elucidated, and that is to save enough specimens and have them thoroughly and carefully examined. The first thought would be that this has already been done, as has been done in a large number of other intra-peritoneal lesions. However, such is not the case. Even at this present day we find men talking and writing about "catarrhal appendicitis." I have taken the position, as some of you know, so far as surgery is concerned, that there is no such thing as catarrhal appendicitis. It is impossible for me to see how a catarrhal inflammation of the appendix could produce symptoms that would even enlist the attention of the physician, much less the surgeon. I do not deny that a catarrhal condition of the appendix may not exist, the same as we have catarrh of the colon, cæcum, etc., but I do claim that all lesions sufficiently well marked to be denominated "appendicitis," are primarily ulcerative or perforative in type, and we might as well eliminate the term "catarrhal appendicitis" from surgery. What has been called catarrhal appendicitis I am quite sure is ulcerative appendicitis, that has led to stenosis at some portion of the lumen of the appendix. I believe if you will slit up appendices removed, a great majority of them will be found constricted at some point. The history of these cases bears this out. For instance, we see a man who has the so-called catarrhal type of appendicitis; the temperature reaches 101° F. but does not get higher than this point, and he recovers. He has a half dozen such attacks and recovers. In the next attack he is suddenly seized with severe pain; in an hour he is in collapse. The surgeon is called at once, and operates, finding the appendix has ruptured and pus in the cavity; rupture has taken place before nature has had time to throw out a wall of lymph, as a protection against invasion of the peritoneal cavity. My idea is, that most of such cases result from stricture, and stricture can only come from cicatricial tissue, resulting from a previous suppurative or ulcerative condition. It is perfectly plain from the anatomy of the appendix, that a portion of the contents of the cæcum may be forced into it, and it may also be discharged again into the cæcum, but the tendency would be for it to remain in the appendix, owing to gravitation. Fecal matter does not normally occupy the appendix, its only contents being a mucous secretion, and I take it when fecal matter is found, it is *prima facia* evidence that the appendix or door to the entrance is diseased. In the majority of cases of ulcerative, non-perforative or tuberculous inflammative type—the so-called catarrhal appendicitis—no special changes are reported to have taken place in the appendix upon examination after removal. If these appendices are examined more closely, stricture, usually near the base, will be discovered, and as a result we have distal distension, an appendix that becomes filled up, at times probably containing pus forming organisms, in other cases only the colon bacillus. Continued contraction of the stricture leads to one of two pathologic terminations; either complete stenosis with distal distension and rupture, or retention, with infection and general septic inflammation of the appendix, leading to necrosis and perforation. The first specimen shown represents the type that we usually find; a rupture of a generally inflamed appendix, surrounded with abundant fibrinous deposit, the so-called perforative type, with a large abscess. The next specimen I show you illustrates the extreme type, operation delayed; small and poorly circumscribed abscess; scarcely any appendix found; simply a little fringe of gangrenous tissue; evidently perforated in two or three places. Now, in this type you observe a case which was probably due to an intense infection, leading to rapid necrosis, the result of bacterial invasion and ischæmia. The third specimen is one of so-called catarrhal appendicitis. The patient from whom this specimen was removed, was sent to Louisville by a physician in the country, with a letter addressed "To Whom It May Concern," stating that the young man had suffered seven attacks of undoubted appendicitis, and that he thought the appendix ought to be removed. He had appendicitis early in November, so the doctor stated—a severe attack—although the young man said he was not in bed more than five days. Upon examination there was no tumor, but I thought I could detect in the region of the appendix a little thickening. As the letter from his physician was so clear that there could be no mistake about the diagnosis,

I went ahead and operated, and found the appendix in the condition which you see. The appendix was coiled up and adherent behind the cæcum, and distended with liquid fecal matter and pus, to about four times the size it now presents. It had never ruptured. The case was one of the character so often reported cured by the administration of large doses of opium. It is a typical case of the so-called catarrhal appendicitis of recurrent type. I have slit the appendix open in its long axis, and you see plainly, about one-half inch from the base, a stricture, the result of cicatrization of a former ulcerative (so-called catarrhal) inflammation; beyond this the appendix is distended, and in a state of quiescent inflammation. Do not such conditions urgently suggest future trouble of a graver character? Many cases of distal distension with rupture, and possibly inchæmic gangrene, may result from a twisting of an otherwise normal appendix upon itself; in this way the trauma leads to perforation, even where stenosis from other inflammatory causes is not present. Such a thing is quite possible, as I have observed one unmistakable case successfully operated upon by Dr. Jas. S. Chenoweth, of this city.

TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, M. D., Fellow of the Academy of Medicine, New York.

Cold Water as an Antipyretic.—Dr. Fisher (*Post Graduate*) has arrived at the following conclusions:

1. That cold water is the best antipyretic used to-day.
2. That it is easily obtainable, and is therefore adapted to all classes of cases, both rich and poor.
3. The mode of application is so simple that it adapts itself to the hospital, and equally as well to private practice, and can be applied without any distinct training.
4. Cautiously given it stimulates,
5. Carelessly used, and longer than required, it depresses, and will produce sub-normal temperature.
6. That rectal temperature should be taken, and the bath at once discontinued when temperature falls to 101°, as it will then continue to fall.
7. That a stimulant administered before the bath may be necessary, and should be given where there is a feeble heart.
8. That the temperature indicates when to commence, and when, also, to discontinue the hydropathic treatment.
9. Unnecessary blanketing after the bath is injurious, and will produce copious perspiration, which I believe weakens the patient.
10. The temperature of the room should always be between 68 and 72°.

Prickly Heat.—Dr. Pollitzer finds that in prickly heat the horny layer of the epidermis is swollen by imbibition of water, the rete malpighii slightly œdematous and containing cystically dilated sweat ducts, the blood vessels of the papillary layer gorged. His view of the etiology of prickly heat is that it develops on a skin soaked in perspiration and insufficiently supplied with fat. He recommends patients suffering from it in summer in hot climates to annoint the regions usually affected with a fat after the morning bath, the fat he advises being lanoline with the addition of a little olive oil.

Cubeba Officinalis in Catarrh.—Dr. Q. O. Sutherland says that the sphere of action of this remedy seems to be wholly upon the mucous membranes. It has proved curative in all varieties of catarrh; of the anterior and posterior nares; of the stomach, intestinal canal and rectum and bladder. Prostatorrhœa and spermatorrhœa are maladies in which it has been used with excellent success. In those epidemics of frequent urination, that occur in young women in seminaries and schools about examination and graduating time, think of cubeba as well as gels. If a young lady or her mother comes to me at such a time, or at any other trying ordeal of life, whether it be a ball, reception or wedding, and tells me that she is well, but has to run to the water closet and pass water every few minutes, I look to cubeba."

Tin-Plate Treatment of Ulcers.—Robert Coltman (*The Universal Medical Journal*, April, 1893) has treated four cases of chronic ulceration on the side of the leg by the above method. Cases had all resisted other plans of treatment for several months. The ulcers were washed with 1 to 1,000 solution of bichloride; he dried the cavity with antiseptic cotton and then filled it with boracic acid, and covered it with a piece of patent lint one-half inch wider than the margin of the ulcer; then fitted a piece of ordinary tin can upon the lint and bound the limb tightly with roller bandages. Improvement was immediate; dressings were removed each third day, and, after washing out the ulcer with hot boracic acid solution, they were re-applied. About three weeks sufficed for a cure.

Water Treatment of Angina Pectoris.—"A good many years ago," says the late Prof. John Kirk, in his Health Papers, "we ourselves were set down as suffering from what high authority called angina pectoris, and this idea of our illness we find historically retained as giving the proper title of the disease from which we suffered at that long past time. We were believed then to be suffering from some disease of the heart. It is still said to be usually connected with heart disease, but this is a misleading notion. The trouble is a cramp, and that not of the heart, but of the stomach. At first a rather slight pain is felt at the back opposite the stomach. The pain increases and moves round on the right side. If we observe carefully, we find that the heart is going all right. But the pain increases and is soon dreadfully severe. If again we observe carefully, while we find that the heart is still going right, the stomach is cramped and rolled up like a hard ball. It is this stomach cramp that is giving the dreadful pain. Something that rolls the stomach up into that small, hard ball is acting upon it in this cramping way, and we should find out, if possible, what that is and how it may be removed. As a rule, we find the usual treatment proving that the persons trying to remedy the evil are entirely ignorant of what is going on in the heart of the patient. For instance, applications of the most irritating character are laid over the heart. Digitalis and similar drugs are given —all to quiet the poor heart that is doing its duty perfectly well. The network of nerves in the stomach is in a bad and irritated way, and these so-called remedies are putting that network into a worse and worse state. The angina is being increased to a fury, and the sufferer is getting so ill, as we remember, coming out of bed in anguish and creeping on hands and knees on the floor, trying to get relief in any way. It was at this crisis, when ignorant helpers were at their wits' end as to what to do, that Dr. Hunter and his bathman brought a shallow tub into the room. They poured cold water into this and made us sit down in it. They then laved the cold water on the back, and the angina in about two minutes was gone. We felt dreadfully weak from the pain we had endured, but that pain was gone; and the stomach, instead of being like a rigid ball, was soft and as it should be. What had really happened? Simply this: the roots of nerves passing from the back to the stomach had been cooled and had relaxed their hold. The cramp was gone, and the pain had gone with it. The bath would be one of about five minutes of cold laving, drying with a kindly rubbing, and finishing with a little olive oil. After one or two such baths the return of the pain will generally cease. So far as we remember, severe mental strain brought on the attack to which I allude."

Dr. Charles E. Page (*Milwaukee Med. Journal*) firmly believes "that, so far as concerns the great majority of these attacks, Prof. Kirk's opinion is correct," and adds, in regard to treatment: "Where the shallow bath and laving

cannot be had, the cold compress laid over the back opposite the stomach, and constantly changed, answers a very good purpose, or the patient may be made to lie upon it. I have often given this treatment and have directed it in several cases of long-time sufferers from this disease, and have seldom been disappointed with the results."

As to preventive measures, he remarks that "one of the most prevalent errors, especially operative with nervous, brainy men and women who seem never to know when they are tired, is that of eating too soon after exhausting work, and of rushing to their work with little or no repose after eating. Another grand mistake and a very common one, is that of eating at all when not hungry, simply because it is 'meal time.' This is a species of self abuse inexcusable for sick or well persons. There is no pleasure in such feeding, and it prevents the speedy return of a normal appetite."

Rational Treatment of Furunculosis.—Dr. Thomas Rovsing (*Hospitals-tidente*, No. 15, 1893,) finds the successful treatment of boils to consist in isolating the first one, and not permitting it to spread over the surrounding skin, and thus give rise to a crop of these pests, very painful and trying on the back of the neck. He does not poultice, but incises the furuncle, presses out the pus, and covers the opening with a piece of absorbent cotton, fastening the edges by means of collodion, and leaving the air ingress through the centre that it may exercise its drying influence.

Solanum Carolinense (Horse-Nettle) in Convulsive Disorders.—Dr. J. L. Napier says (*American Therapist*): "Since becoming acquainted with the use of the above plant, about five years ago, I have treated quite a number of cases of epilepsy with it, and have several cases under treatment now. I have seen it completely control the convulsions of traumatic epilepsy, and thereby make life bearable. I have seen it do what I never saw anything else do—*cure epilepsy*. I do not claim that it will cure all cases of epilepsy. I do claim that, if intelligently given, it will *benefit all cases and cure a large percentage of them*. Whenever the profession takes hold of it, and there is an active demand for it, the manufacturing chemist will find the active principle and isolate it; then we will have a drug of uniform strength with which to work.

"I have seen twenty drops of a strong tincture completely control the convulsions in an adult, and again I have given, every three hours, a tablespoonful, with the happiest effect. I never seen any bad effects from the use of it in large doses. My rule is, if I have a case that shows obstinacy, to keep on increasing the dose until I get complete control of the nervous system.

"A teaspoonful given every three hours will produce dizziness and then stupor. I had a case in an adult male, who through mistake took a teaspoonful every three hours, until he had taken eight ounces of a strong tincture. He has not has an epileptic attack since taking it, three years ago. He had been an epileptic eight years.

"Dr. A. G. Selman has published two papers in the *Medical Brief* on the subject. After detailing a number of cases, he gives the case of a young German, nineteen years, who had been an epileptic from early childhood. He had convulsions almost daily. Mentally, he was almost an idiot. He began the use of the tincture and steadily increased the dose until he gave him one-half ounce three times a day for a week, at the end of which time he was in a stupor. The stupor lasted a week. The lad could be easily aroused and made to take nourishment. From the time the stupor passed off to the date of his paper, three months, there had been no return of the disease, and his mind was rapidly improving.

"I have known people who had taken potassium bromide until they were almost mental wrecks; but I have never seen any deleterious effects from the nettle.

"I was requested by a medical friend to try the nettle in a case of chorea about two years ago. The case was a twelve-year-old daughter of a preacher. The girl had been subject to attacks of chorea which lasted for weeks at a time, for several years. She had been thoroughly treated with the usual drugs by competent physicians without relief. The nettle was tried as an experiment. I instructed the father, a very intelligent man, to begin with a teaspoonful every three hours, and if necessary, to increase or diminish the dose, according to the effect. He kept the dose at a teaspoonful until she had taken four ounces, then at longer intervals. Soon after she had began the use of the medicine, the muscular twitchings subsided, and she has not had a return of the disease since. I saw him a few days ago and made inquiry about the case. He attributes the cure to the use of the nettle."

Liq. Auri et Arsenii Bromidi in Sclerosis.—Dr. E. A. Wood, in a paper on "Gold in Therapy," read before the Mississippi Valley Medical Association, says: "The successful combining of gold with bromide, mercury, arsenic and other metals, is owing to the indefatigable labors of Dr. W. F. Barclay, of Pittsburg, who presevered in the face of the decree of some chemist that such compounds are impossible. There stands the liquid bromide of gold and arsenic. As there is no filtering employed in the manufacturing of these liquors, every atom of the metals must be present. I am not sure that it will not fade under exposure to light, but I know that after months' standing, not a shadow of sediment mars its complete transparency. It is almost tasteless. The dose—ten drops—contains one thirty-second grain of gold, and one-sixteenth grain of bromide of arsenic. The preparation is pleasant to take, is more readily absorbed than the chloride of gold and sodium, and, in my experience, more assimilable and active than the double salt. Of course, the gold is modified and its action intensified by the combination with other metals.

"The class of diseases in which I have found gold to be peculiarly efficient, and in which it seems to be curative above all other drugs, is that class in which sclerosis is the chief factor. Cirrhosis of the lungs, certain forms of consumption—fibroid consumption, miliary tuberculosis—and especially that form of consumption in which masses of lymph become organized in the lymphatics of the lungs, as we see the process in the glands of the neck and called adenitis; cirrhosis of the liver; interstitial nephritis; atheroma and its associate, calcareous degeneration of the arteries; the circumscribed induration following embolism or bloodclot in the brain tissue; senility and its train of decrepitudes—for what is old age but a general sclerosis?—all belong to the class I have named. It is my belief, founded on an experience of twenty years, that gold is far more efficient in all these lesions than any other known drug. I desire to say in addition that the liquid preparations of gold, as combined with bromine, arsenic, iodine and mercury, are as much superior to the chloride of gold and sodium as is quinine to the crude Peruvian bark.

"In addition to its efficiency in the scleroses, it would seem as though gold—at least the liq. auri et arsenii bromidi—exercises a power as a tonic and nutrient to the nervous system, especially to the nervous systems of those who have advanced to fifty and beyond. May it not be that in cases of neurotic diseases of the aged there is sclerosis? Certain it is that gold is not so efficacious in functional nervous ailments of the young. It is just to remember, too, that the association of gold with bromine and arsenic may have very much to do with its curative powers. But for all that gold and its preparations is the medicine for those in middle life and in old age. It stimulates the brain, incites a flow of spirits, gives sleep to the sleepless, courage to the despondent, and intensifies sexual desire and power. Gold should maintain physical vigor and prolong life, even if taken when there is no disease except the inherited tendency to decay before reaching the Bible limit of life.

"Does gold ever fail to cure? Yes, if given in cases unsuited for it. But in the scleroses, while it may fail, it will accomplish more cures than any other remedy."

Acetic Ether as a Stimulant.—Dr. Krautwig (*Weiner Med. Presse*, No. 23, 1893,) finds acetic ether to have stimulant action upon the respiration and heart beat. It doubles the respirations in number, without having a

transitory action. This increase reaches its height in one-quarter to one-half an hour, and gradually decreases. A small dose will develop its full action, while an increase in dose, the contrary of sulphuric ether, will have an opposite influence. Acetic ether has an efficacious influence upon a demented and reduced respiration. Introduced directly into the circulation it does not injure the blood corpuscles or cause thrombi. Used in quantities sufficient to strengthen respiration it does not in any way exert injurious effect upon the heart. It is always reliable, and when taken internally only causes an agreeable sensation of warmth in the stomach. Subcutaneously it only causes some pain at the point of injection, which rapidly disappears. He recommends in the place of camphor or ether. One may begin with one-half a cubic centimetre, twenty drops, and slowly increase the dose.

Internal Massage in the Treatment of Hay Fever.—Internal massage is being applied to the nasal tract with remarkable results. Hypertrophied sections of tissues subside to their normal dimensions, while atrophied portions develop by the same treatment. This consists in the local use of a vibrator, operated by electricity. Freudenthal, *Medical Record*, speaks of treating in this way six cases of hay fever. Five were treated once or twice daily, and the attack was reduced to from fourteen to ten days, while it formerly lasted four to six weeks longer.

Tincture of Chloride Iron in Scalds and Burns.—Dr. Starr states that where the cuticle is gone in scalds or burns the officinal tincture diluted with half to a third as much water will, applied immediately, not only allay pain but will prevent blisters. An ointment made of one part of the tincture of iron and eight parts of vaseline or lard, makes, when spread on a soft cloth, an admirable dressing for old sores left by burns.

Quinine in the Treatment of Wounds.—Alföldi (*Therap. Monatsh.*) has observed that in the case of infected lesions showing no disposition to heal, the application of a one per cent. solution of quinine sulphate produces far better and more speedy effects than sublimate or iodoform dressings, and brings about union with surprising rapidity when the wound is clean.

Nitro-Glycerin in Vomiting.—Dr. R. Humphreys (*Brit. Med. Jour.*) has used nitro-glycerin systematically for the last three years in every form of vomiting he has met with, and as it is a drug which is not incompatible with other drugs likely to be employed under such circumstances, while it has proved of the greatest service, he thinks that it may be as well to record this use of it, as he can find no mention of it as a general remedy in vomiting. In vomiting in gastric catarrh, whether adult or infantile, acute or chronic, alcoholic or anæmic, he has found it to act almost as a specific. The vomiting ceases at once. In a case of vomiting of advanced pregnancy, he found it to be of the greatest service, and in some cerebral cases it also markedly checked the sickness. In peritonitis alone it increased the vomiting, not, however, to a distressing extent, and the effect soon passed off. He ventures to suggest that this may prove a point of diagnostic value in doubtful cases. In vomiting in connection with pulmonary phthisis it proved of little value, where atropine stopped it for the time. In combination with catechu, it acted very well in several cases of lienteric diarrhœa. The vomiting of influenza was often relieved by it, though not to the same extent as by atropine. He has seen no bad effects from its use.

Favorite Turkish Dishes.—Messrs. Allen and Sachtleben, the two young American students who made a tour around the world on bicycles, tell many interesting stories of their experiences in Asia. In the first of a series of articles written for *The Century*, which appears in the May number, they give the following account of the dishes that were set before them in Turkey:

As all cooking and eating had stopped at the sound of the morning cannon, we found great difficulty in gathering together even a cold breakfast of *ekmek*, *yaourt*, and raisins. Ekmek is a cooked bran-flour paste, which has the thinness, consistency, and almost the taste of blotting-paper. This is the Turkish peasant's staff of life. He carries it with him everywhere; so did we. As it was made in huge circular sheets, we would often punch a hole in the middle, and slip it up over our arms. This we found the handiest and most serviceable mode of transportation, being handy to eat without removing our hands from the handle-bars, and also answering the purpose of sails in case of a favoring wind.

Yaourt, another almost universal food, is milk curdled with rennet. This, as well as all foods that are not liquid, they scoop up with a roll of ekmek, a part of the scoop being taken with every mouthful. Raisins here, as well as in many other parts of the country, are very cheap. We paid two piasters (about nine cents) for an *oche* (two and a half pounds), but we soon made the discovery that a Turkish oche contained a great many "stones"—which, of course, was purely accidental. Eggs, also, we found exceedingly cheap. On one occasion, twenty-five were set before us, in response to our call for eggs to the value of one piaster—four and a half cents.

In Asiatic Turkey we had some extraordinary dishes served to us, including daintily prepared leeches. But the worst mixture, perhaps, was the "Bairam soup," which contains over a dozen ingredients, including peas, prunes, walnuts, cherries, dates, white and black beans, apricots, cracked wheat, raisins, etc.—all mixed in cold water. Bairam is the period of feasting after the Ramadan fast.

Sulfonal as a Sleep-Producer.—In a discussion which recently took place before the Therapeutical Society of Paris on the comparative value of hypnotics, Dr. Bardet stated that sulfonal produced sleep without anæsthesia, and had the advantage over chloral of not disturbing the digestive organs. As a hypnotic in the insomnia of the insane, this remedy has gained a high reputation. In an article on the care and treatment of the insane, Dr. Wilson (*Virginia Med. Monthly*) says: "Sulfonal is a good hypnotic, in doses of from ten to twenty grains; indeed, as high as thirty grains is sometimes given, but the maximum doses of these remedies should not be administered at the commencement. Sulfonal has the advantage of not being disagreeable to take, and can be given with the food; it is now largely used. Dr. Clevenger says that in treating the insane sulfonal has the advantage of solubility in hot tea and coffee, and can, therefore, be given without the patient's knowledge. Recently, Dr. Louis Fischer (*Med. Record*, Feb. 17, 1894) has called attention to the value of sulfonal in the treatment of the opium poisoning in children, to whom this drug had been administered for some acute disorder, usually of diarrhœal character, and its use contemned by mother or nurse for purposes of allaying restlessness and irritability. In the sudden or gradual weaning from opium, sulfonal proved an admirable remedy for promoting sleep and overcoming restlessness, and as these cases are not infrequent, Dr. Fischer's experience deserves careful consideration.

Easy to Diagnose.—From the *Medical Record* we learn how to diagnose the sex and the type of mind of the patient by the manner in which he or she furnishes urine for diagnostic examination. All careful observers will have noted a general fact, that women bring smaller bottles than men. The sex stands out strongly here. The element of modesty enters, we have no doubt, in the production of this phenomenon.

A half-ounce vial, partly filled, rather badly wrapped up, with a white cotton thread round the neck, indicates a woman of a sensitive temperament, and not much used to personal medication. Sometimes the specimen is two or three days old, which means that it was procured directly after the last consultation, so that it should not be forgotten. Hysterical women are much more apt to have liberal ideas as to quantity, probably on account of a polyuria, which furnishes a rich supply. The mother always sends a small sample of the baby's renal work. Here one can easily see the working of a logical mind, which some ignorantly deny to women. The baby being small, natur-

ally not so much of a specimen is needed. Men unquestionably take a larger and more generous view of what the doctor needs. A half-pint to a pint of morning urine seems to be considered the correct thing. Occasionally, two bottles, neatly done up and carefully labeled "morning" and "night" are furnished as a basis for a scientific study. When a patient, on calling, takes from his pocket two bottles thus marked, which he has voluntarily prepared, a diagnosis of morbid introspection and chronic invalidism can at once be made.

Estimation of Urea.—Of the many methods of estimating the amount of urea in urine, the following, by Dr. Charles Doremus, of New York, is the most practical (*Buffalo Med. and Surg. Jour.*): A curved tube, similar to the saccharometer of Einhorn, is filled to the bulb with a known solution of hypobromite, and then with a pipette the urine is slowly introduced. Rapidly the urea is decomposed and the nitrogen fills the upper end of the tube, displacing the urine into the bulb. When the action has ceased, the graduations show the number of grams or grains of urea to the CC. or oz., then, by knowing the amount of urine passed during the twenty-four hours, the daily amount of urea is easily found.

Brain-Work and Vitality.—As a factor in longevity, the *London Speaker* calls attention to the fact that those people who have been accustomed to the continued disciplinary use of their brains daily, and who have thus placed their nerve power under a highly developed condition of constitutional training, are enabled by these very means to escape the so-called early decay, and to avoid those alarming accidents to health, from which so many apparently healthy men succumb. People who use their brains and observe ordinary hygenic care of their bodies, resist disease in the first place, and when they are actually ill, prolong their lives or recuperate sooner than do those who have lived less intellectual lives. Thus there is given a new force to the assertion "that you may kill a man with anxiety very quickly, but it is difficult to kill him with work.

"Whether the brain can actually give power to the muscles is not certain, though the enormous strength sometimes developed in a last rally looks very like it. That it can materially affect vitality is quite certain, and has been acknowledged by the experienced in all ages."

Ausculted Percussion of the Long Bones to Detect a Fracture.—Vajana (*La Riforma Medica*) describes a method of detecting a fracture of the long bones. A stethoscope is placed upon the bone and percussion done either by the examiner or a second person, when, in case of a fracture, a loud and harsh sound is heard, which is diminished by withdrawing the stethoscope from the point of fracture. It is to be explained by the solution of molecular continuity which interferes with the transmission of the sound. The difference is still better observed by percussing the opposite bone and comparing the results.

Lydston on the Rational Treatment of Bubo.—The author advocates the early and complete extirpation of all buboes. He claims that when suppuration has begun in the glands—and he believes that this suppuration begins early, even as soon as soon as the third day—the inflammation extends to the peri-glandular tissue, and then the case becomes long and obstinate from the continued suppuration. It is his opinion that an early operation should be urged in all cases of bubo that are not distinctly syphilitic, and even in the latter where a tendency to inflammation exists. By thus operating we secure: 1. Possible security from constitutional sepsis. 2. Immunity from possible gland tuberculosis and secondary general infection. 3. Prevention of suppuration, chronic abscesses and sinuses. 4. Avoidance of extensive tissue destruction, and a resulting unsightly scar. 5. An avoidance of serious interruption of the patient's vocation. 6. A duration of healing, measured by a few days or weeks, in lieu of the many weeks or months required by other plans of management. 7. Freedom from dangerous, infective, or hemorrhagic complications.

Eczema of Nickel Platers.—Dr. K. Groen records (*Norsk Magazin for Loegevidenskaben*) three cases of eczema of nickel platers, which disease was first reported by Blaschko, of Berlin. They were all observed in young women, aged respectively seventeen, nineteen, and thirty years, who, for a time varying between one month to three years, had worked in a nickel plating establishment. In two of them there were slight forms of eczema, with eczematous vesicles on the fingers and the lower portion of the forearms, and characteristic rhagades along the fingers. In the third case there was an abundant vesico-papular eruption along the forearms and on the face. The patient being again exposed to acid vapors in the process of nickeling, she was attacked again with an eruption on the forearms, and extensive œdema of the face, while the fingers were relatively but slightly affected. None of the cases resisted the treatment by compresses soaked in a solution of argentic nitrate, dusting powders of starch, and salicylate of zinc, or starch and the oxide of zinc. The œdema was successfully treated by local applications of compresses wetted in a solution of the acetate of lead and boric acid.

Poisoning by Eucalyptus Oil.—Dr. Neale reports (*Australasian Med. Gaz.*) a case of fatal poisoning by oil of eucalyptus; also, several cases wherein profound toxic effects were induced by the same drug, but with ultimate recovery.

Antidote for Morphine.—The well-known fact that potassium permanganate readily parts with a portion of its oxygen, and thus acts as an energetic oxidizer, has suggested its use as an antidote to various organic poisons, and experiments have been made in that direction by different observers.

The most striking of these, perhaps, is the test of Dr. Wm. Moor, who swallowed, in the presence of a number of prominent physicians, three grains of morphine, taking four grains of potassium permanganate in four ounces of water, about thirty seconds intervening between two doses; and no ill effects followed.

This was, of course, not his first experiment. He ascertained that decomposition occurred very rapidly when solutions of morphine and the permanganate were mixed—much more rapidly than when the permanganate was brought in contact with albuminous bodies. From this he argued that it would select the morphine in the contents of the stomach, and so react with it at once. Experiments were first made on animals, and subsequently on himself with moderate doses.

Whether the poison could be reached in the circulation, or how long after, has not been settled. Dr. Moor refers to the experiments of Hitzig, showing that poisons injected in the veins soon after appear in the stomach, and he believes that this will occur as well with poisons first taken through the stomach. If this be established, then portions of it could, of course, be reached by the antidote some time after the ingestion of the poison, repeated doses being given.

OBITUARY.

DR. H. M. DAYFOOT, of Rochester, N. Y., died at Hahnemann Hospital, Philadelphia, Pa., April 22d, of pulmonary embolism. Dr. Dayfoot will long be remembered by his hosts of friends for his warm, sympathetic nature and for his skill and faithfulness in the duties of his calling, and by his professional brethren for his ability and counsel, and for the energy he infused into all his work for the good of humanity.

MISCELLANY.

—Artificial ivory is made from condensed skim milk.

—Scotland has one doctor to about every fifteen hundred of the population. Only twelve of these are female physicians.

—A late Iowa Supreme Court decision makes a physician liable for damages accruing from his having dismissed a case too soon.

—Blood makes a good glue for affixing labels, and the blood of a person dying from hydrocyanic poisoning makes a most excellent red ink, which will keep for years without the addition of any preservative fluid.

—The simplest way to tell iron from steel is to pour on the metal a drop of nitric acid, and allow it to act for one minute. On rinsing with water a grayish-white stain will be seen if the metal is iron; a black one if it is steel.

—M. Frederic Chevallier has bequeathed the French Academy of Medicine a sum which will afford a prize of six thousand francs, to be given every two years to the author of the best work on phthisis and its treatment.

—Convulsions in children may frequently be cut short like magic, by turning the patient on the left side. It is also said that the nausea resulting from chloroform or ether may generally be controlled in the same manner.

—Dr. Bouchard says that a simple and easily applied means of recognizing in a certain and indubitable manner the presence of death is by noting the temperature found in the armpit. If it descends below 68° F., it is a positive sign of death.

—The will of Sir Andrew Clark disposes of a property worth $1,021,000. A legacy of $2,500 is to be used in founding a medical scholarship at the London Hospital. The rest is to be distributed in the family. Sir Andrew started in life with only a small independent income.

—Starving a babe, says Dr. Holt, will cause a rise of temperature. A temperature of 101° or above, in the first few weeks of an infant's life, always means that the infant is not getting sufficient nourishment. Sufficient food will in such cases, promptly reduce the temperature to normal.

—Patients with nervous and mental disorders often exhibit remarkable changes of weight. A French epileptic recently gained thirty-six pounds in twenty-six days and then lost it again, falling off 2.2 pounds in three days, treatment and diet meanwhile remaining precisely the same.

—The North Carolina Board of Medical Examiners has offered, when complaints are made by candidates who failed to pass, that the questions submitted to the applicant, together with his written answers, should be published, and no one who was rejected has chosen to make the exhibit.

—Dr. Page, of the *New York Polyclinic*, says, as the result of numerons experiments, made by himself, that the sulphuric acid treatment is useless or worse. He recommends the iodide treatment, the iodide of lead being formed, which being a soluble salt, is rapidly eliminated by the sweat glands and kidneys.

—An idea of the social status of the medical profession in England may be gleaned from the fact that the Duke of Westminster, a large proprietor of houses in a fashionable quarter of London, refuses to lease any of these to physicians, surgeons or dentists, lest prospective fashionable tenants be frightened away.

—A fact not to be forgotten in the use of the galvanocautery is that beside the cherry-heat, mentioned so often in text-books as a preventive of hemorrhage, it is just as important that the instrument be dull. Ordinary jewellers' binding wire, which is soft iron, is just as efficacious as platinum and far cheaper.

—"Doctor Greene," who was a New Jersey farmer, afterwards a clock peddler, and still later the manufacturer of "Greene's August Flower," after having manufactured that preparation for many years at an immense profit, sold it out to a corporation from which he received an annual royalty of $40,000.

—In cases of retention of urine in young children, it is often the case that an enema, thrown into the rectum, will so stimulate both the centres for defecation, and the genito-spinal centre for urination, as to bring about micturition without catherization—a proceeding always dangerous in young children, unless anæsthetized.

—In Sweden ten years of study is incumbent on every medical student. They are so particular in that enlightened country to have their medical men thoroughly equipped and "ethically developed" that the practice of Homœopathy is forbidden, and every globule of Homœopathic medicine introduced into the country has to be smuggled in.

—Tuffier has resected the apex of the lung for tuberculosis. The affected portion of the lung was ligated and removed. It was found to contain tuberculous deposits, in which were the characteristic bacilli. The wound healed by first intention, and the patient made a speedy recovery. He has resumed work, is free from cough and has increased in weight.

—Dr. Grigorieff, a Russian surgeon, in order to set a fracture or reduce a dislocation, makes the manipulation painless by injecting cocaine into three or four points in the neighborhood of the joint; he uses a five per cent. solution, injecting fifteen minims at each point. This not only deadens all sense of pain, but relaxes the muscles, etc., around the joints.

—Professor Friedenwald, at the College of Physicians and Surgeons, Baltimore, recently gave a demonstration of the illumination of the interior of the human body. He passed a small electric lamp into the stomach of a patient, and over 200 people in a darkened room were able to watch the working of the patient's organs through the transparency thus produced in the abdominal wall.

—Dr. William P. Northrup has been appointed Adjunct Professor of Diseases of Children in the Bellevue Hospital Medical College. Dr. Northrup's long connection with the great infants' hospital in this city has given him a large fund of clinical facts, which, with his well-known facility of imparting instruction, renders his connection with a medical college a peculiarly desirable one.

—A Michigan court lately decided that Harper Hospital, being a charitable institution, was not liable for damages in any case suffering injury while being treated within its walls. The case calling forth the decision was one in which a man suffering from an attack of insanity, broke through a window and screen and threw himself to the ground below. Suit was brought to recover damages, with the result stated.

—The government of the republic of Colombia has, in view of the possibility of contagious diseases, such as ringworm, favus, and syphilis, being transmitted by combs, brushes, etc., passed an enactment making it compulsory for all barbers and hairdressers to keep the instruments of their art clean, and to disinfect them every time they have been used. A notice to this effect is to be posted up in all tonsorial establishments.

—The plan of using electricity to produce a cheap disinfectant from ordinary water, tried in this city last summer, is being tried with great success at Havre and L'Orient, France, according to *La Lumiere Electrique*. The sea-water, after being electrolyzed, is conducted through lead pipes to the various houses, where it can be drawn upon at will. The destruction of germs is absolute, while the fertilizing properties of the sewage are unimpaired. The cost is about forty cents a year for each member of the population.

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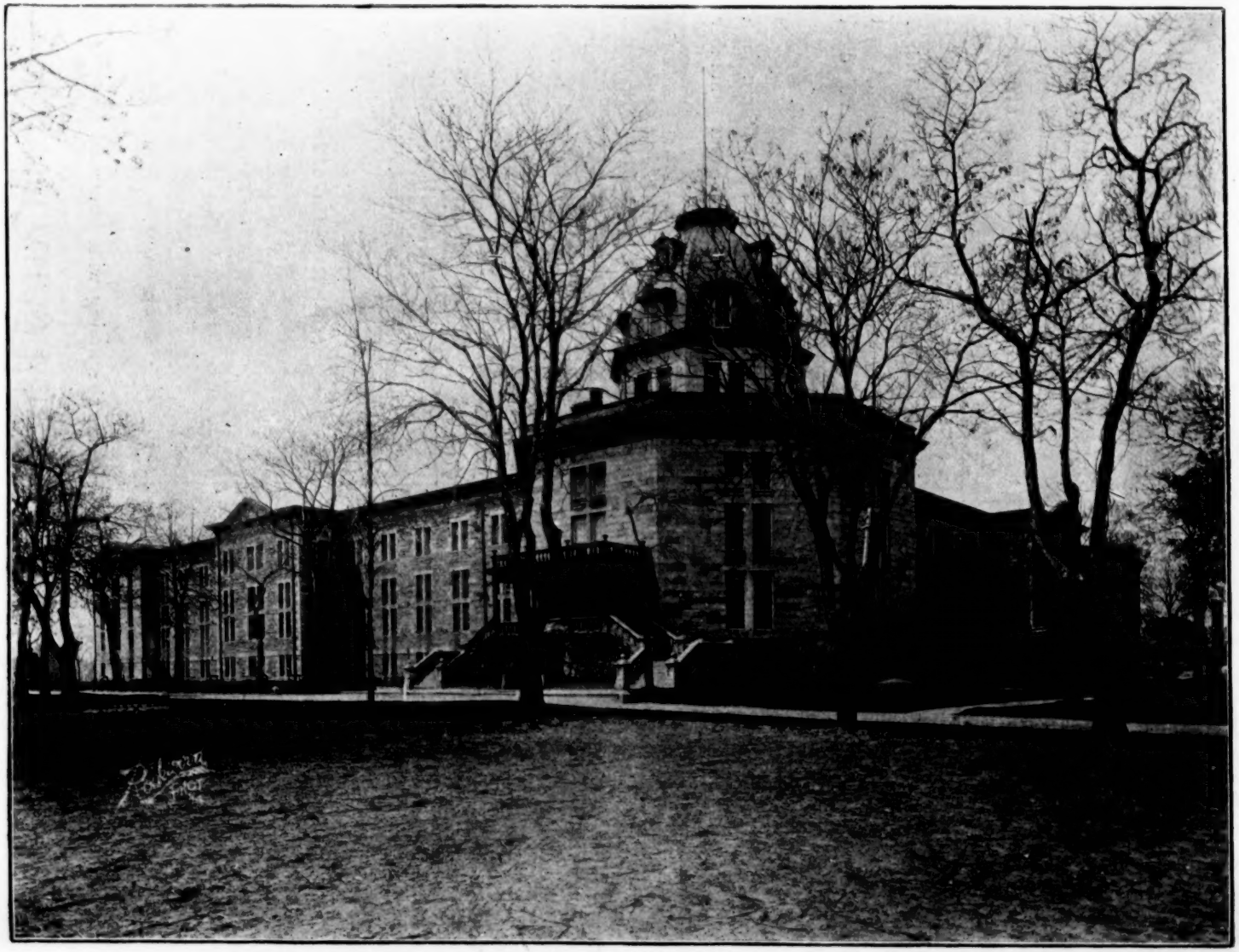
Miss ELLA G. VANCE, Directress.



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